

OCT 5 - 1931

October, 1931

Clinical Medicine and Surgery

Volume 38

Number 10

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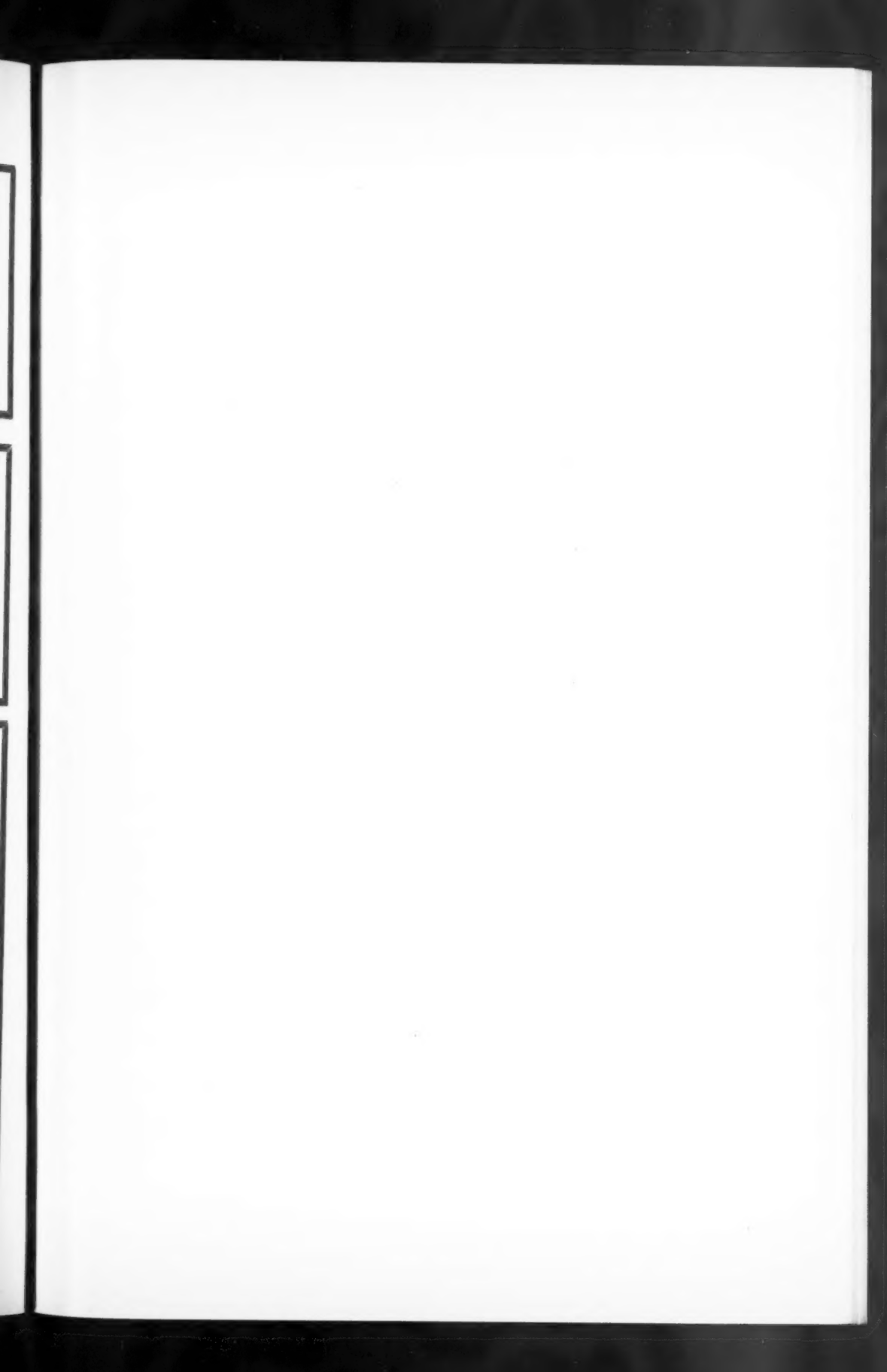
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MAJ. GEN. ROBERT U. PATTERSON, M.D., C.M., D.S.M.
SURGEON GENERAL, U. S. ARMY



CLINICAL · MEDICINE AND · SURGERY

VOLUME 38

OCTOBER, 1931

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General Patterson

WITH the retirement, on account of age, on May 31, 1931, of Major General Merritte W. Ireland, the Surgeon General, the Army lost a distinguished soldier, scholar, diplomat and administrator; but his mantle has fallen upon shoulders which are able to wear it with dignity and distinction.

Robert Urie, son of the late William J. B. and Eleanor (Lay) Patterson, was born June 16, 1877, and is one of five brothers who held commissions in the United States Army during the World War.

He received his medical and surgical degrees (M.D., C.M.) from McGill University, Montreal, Canada, in 1898. In 1901 he was appointed Assistant Surgeon, U.S.A., from Maryland, and the next year was an honor graduate from the Army Medical School, immediately following which he was ordered to the Philippine Islands for duty.

Those were stirring days in the Philippines! The insurrection was scarcely over in the North, and in the South the turbulent and barbarous Moros were trying to find out whether their new rulers had any more blood and gristle in their makeup than had been the portion of the Spaniards, whom they had encountered on more

than equal terms for several centuries. They found out!

In January, 1903, the young Assistant Surgeon was ordered to Camp Vicars, on the Island of Mindanao, and promptly became mixed up in the fighting which was going on in the mountainous region around Lake Lanao, under General John J. Pershing, who was then a captain of Cavalry, and also under Major General Leonard Wood. He remained in that neighborhood for nearly two years, and was awarded two silver citations for gallantry in action in the various Moro fights.

From that time (1905) until the beginning of the World War, General Patterson lived the active and varied life of an Army Medical Officer, which in his case, included three years (1906 to 1909) as a member of the Army of Cuban Pacification.

The outbreak of hostilities found him in charge of the first-aid department and bureau of medical service of the American National Red Cross. In that capacity he sailed to Europe, in September, 1914, and delivered hospital units and supplies to all of the belligerents. He also equipped the Red Cross Serbian Sanitary Commission, in 1915.

Soon after the United States entered

the conflict (May 6, 1917), Patterson (he was then a lieutenant colonel) embarked for overseas, in command of U. S. Army Base Hospital No. 5 (the Harvard unit), which served with the British Expeditionary Forces in Flanders. The first U. S. Army deaths by enemy action occurred in this unit on Sept. 4, 1917, when the Germans dropped bombs from airplanes. Later he was general medical inspector of the American Expeditionary Forces and saw heavy fighting in Belleau Wood.

Since the War, Gen. Patterson has seen service as an instructor in the Army War College; on the War Department General Staff; as Medical Director, U. S. Veterans' Bureau; as executive officer in the Surgeon General's Office; as Commanding Officer of the Army and Navy General Hospital, Hot Springs, Ark.; and as Department Surgeon in Hawaii, from which last post he was called to Washington to be made Surgeon-General, in May, 1931. During this time he was also graduated from the Army War College.

In addition to numerous campaign and service badges, General Patterson wears the Distinguished Service Medal, the Italian Order of the Crown and War Service Ribbon, the Czechoslovak Order of the White Lion and the British Citation Ribbon. He is a fellow of the A.M.A. and a member of the Association of Military Surgeons of the United States, as well as of other associations and clubs.

With such a record, as a soldier, scholar and gifted executive, behind the new Surgeon General, there is every reason to feel sure that the administration of that office will lose none of the effectiveness which has characterized it during Gen. Ireland's service, and that the affairs of the Medical Department of the Army are in wise, strong and capable hands.

The basis of all progress is self-reliance.—C. Humphreys.

Let no one beguile you with dreams of idleness. Life without toil, if possible, would be an intolerable existence. Work is the sublime luxury of life.—WARREN G. HARDING.

MORALE AND DISCIPLINE

PRIMITIVE man was and is highly individualistic; and this is true, whether the primitive person is a savage of the Kalihari Desert or a white man in a hard-boiled shirt, inhabiting a western metropolis. Primitiveness, then, is something which lives inside of a man and has nothing to do with the kind of wrappings in which his physical body is encased.

Moreover, the thoroughly primitive man—and all young children are, in essence, little savages or barbarians—reacts to any physical, emotional or mental stimulus which may impinge upon his consciousness, instantly and with perfect naiveté. He has no inhibitions and exercises no restraints upon his conduct.

The mark of an evolved organism (and social groups react and function like biologic organisms) is complexity of structure and specialization of activity. The ameba is all skin; all digestive system; all reproductive apparatus. The earthworm has only one sense—touch—but has developed a gastrointestinal tube, muscular fibers and nerves—all specialized structures. Man carries complexity and specialization to the highest point they have reached, so far.

With complexity and specialization to the fore, mutual dependence and its logical corollary, cooperation, make their appearance; or, to the extent that they do not, the person in whom they fail to appear must be classified as more or less a primitive—a savage or a child.

The process of growing up, of evolving, of becoming civilized, consists, basically, of learning so to regulate one's activities (and, later, one's emotions and thoughts) that they fit into the scheme and minister to the welfare of that complex social organism which we call the body politic. This process is called discipline.

The best and highest type of discipline is that which a man develops within his own being and which holds him to the lines of conduct which he has laid down

as being proper and salutary for himself and his associates. The self-disciplined man does not have to be watched in order to keep him straight. He is self-starting; self-propelling; and self-steering.

Up to now, however, the vast majority of human beings have to be controlled by some stronger will and intelligence outside of themselves, and this is the place for organized and applied discipline.

The two forces which keep more or less primitive people in line are the hope of rewards, of a material or immaterial nature, and the fear of punishment, which latter may vary all the way from hanging to the mild disapproval of the group or of some particular member of it whose good opinion is especially desired.

From his earliest years, every child should be taught discipline; not by harsh words and blows, but first by inculcating and gently but firmly insisting upon the acquirement of regular, orderly and pro-social habits of action, feeling and thought. Later, as the mind begins to develop and function, the advantages of certain types of behavior and the disadvantages of others may be pointed out and illustrated by concrete examples among the people whom the child knows well and either admires or despises.

Fear should be used in this scheme as little as possible, nor should direct and tangible rewards be depended upon, *unless they are related to the line of conduct in the same way they will be in later life.* To give a child a dime for weeding a flower bed is very different from rewarding him in the same way because he refrained from beating little sister over the head with a monkey wrench.

For discipline, one may profitably use the natural incentives to right action, such as example, rivalry, social approval, continuity in proper habits of action and the acquirement of all sorts of knowledge, especially that of the inescapable nature and universal application of the law of cause and effect.

A natural corollary of the acquirement of discipline and knowledge is the development of that somewhat intangible quality or condition which we call *morale*, which is so difficult to define, but without which the highest success and happiness are impossible. It is affected, more or less, in all of us, by physical factors such as hunger, fatigue, fears of all kinds, illness and the like. But the fact that men have gone on to high places, in spite of physical handicaps which most of us would consider insuperable, while others, with immense physical advantages, have fallen by the wayside, seems valid evidence that it is the qualities upstairs—discipline and knowledge—which have most to do with those “moral” or psychic factors, also upstairs—zeal, spirit, hope, confidence—which we symbolize by the word, morale.

While these suggestions have been, to some extent, pointed toward those who are engaged in the upbringing of children, they apply with equal force to all persons who, to any degree, have failed to grow up, and can be applied to the personal conduct of individuals themselves with even better results than when they are enforced by some outside agency.

In general, physicians tend to be highly individualistic and, therefore, according to this thesis, more or less primitive in their reactions. It might be worth while cultivating a more active social consciousness and observing whether or not this raises our morale.

We have committed the Golden Rule to memory; let us now commit it to life.—Edwin Markham.

CALCIUM AND THE LEUKOCYTES

DURING the past few years, the leukocytes, which loomed up so prominently in the mind of Metchnikoff, have been coming in for a degree of attention which seems to be overdue to them, they having been so long obscured by the ponderous and complicated side-chain theory of Ehrlich.

Now that the ice is broken (Burr Fer-

guson, of Birmingham, has been one of the most picturesque and vociferous ice breakers), their powers and peculiarities are being discussed—and very generally lauded—in many quarters, and many medicinal substances, whose action has, hitherto, been rather obscure, are now being recognized as stimulators of the phagocytes—which may or may not account fully for their therapeutic value.

An article by Ruth Tunnick, in the *Journal of Infectious Diseases* for February, 1931, records some careful observations in this direction, which once more established the efficiency in this particular line of our old friends the arsphenamines, sodium salicylate and the quinine salts; cast decided doubt upon the powers of two which we have looked upon as belonging in this class (milk and mercurochrome), at least when they are given intravenously; and added three, previously little known members to the group—calcium gluconate, sodium iodide and dextrose. (Calcium chloride had been on the list before.)

Of these three, calcium gluconate produced the greatest rise in the phagocytic index (to 78 percent, when injected, intravenously, in a 1:40 solution); 50-percent, dextrose, when diluted 1:160, caused a rise to 38 percent; while sodium iodide, 1:40, brought the index up to only 23 percent. (The index, in controls, varied between 4 and 16 percent, with an average of about 9.)

Another interesting thing about this calcium salt is that, when once the phagocytic index has been pushed up by intravenous injections, it can be held at a fairly high level by giving the drug intramuscularly (it is non-irritating) for a while, and then by mouth for another period. After a time the phagocyte stimulation diminishes, as it does when other stimulators are repeated, and then the wise clinician will give this drug a rest, for a time, and use one of the others until the patient's tissues again become sensitive to the first.

Perhaps this property, even if it was not recognized, has been one of the reasons why the iodides have been popular for many years as "alteratives"; and it may be one of the reasons for the rather recent but well deserved therapeutic reputation of calcium and dextrose. Maybe that is one of the factors back of the interesting results reported by Dr. Karrenberg, in our September issue.

In any case, the time has come when it behooves every clinician to be thinking, more or less, in terms, of leukocyte stimulation, when he is considering methods of treatment for any form of infection; and it is not beyond the bounds of possibility that the future may show us that the white blood cells are intimately concerned in all or most of the processes of metabolism and wound repair.

The will to cure, at any cost, is indispensable in a doctor.—Grand Duke Alexander.

PHYSICS AND THE PHYSICIAN

IN THE days of our grandfathers, medical men were known as Doctors of Physic—partly, perhaps, because a large part of their therapeutic armamentarium consisted of drugs which were colloquially known by that homely name.

There is, however, a possibility that the word had something to do with that great branch of science known as physics, for certainly that science (especially if we include bio-physics, as is now customarily done) has always played a large part in the practice of medicine (or physic), and more so today than ever before.

When we consider that all matters having to do with light, heat, electricity, ultraviolet and x-rays and all other types of therapeutic radiations; all of our agencies for administering physical therapy; all of our orthopedic and most of our surgical appliances; all of our microscopes, spectrosopes, stereoscopes, electrocardiographs, metabolimeters and other apparatus for research and diagnosis; all our spectacles

and devices for improving hearing; as well as our cameras, moving picture machines and other projectors and a host of other things we use daily are based squarely upon the principles of physics, we begin to realize how much we depend upon this science and what a debt we owe to it.

Moreover, in these days when our old conceptions of the nature and behavior of matter are being entirely reorganized, the dividing line between physics and chemistry (to which we have long paid homage as our chief benefactor) are constantly becoming less well defined, so that, in the most modern researches, the physicist and the chemist are working, of necessity, hand in hand.

Under such circumstances, no physician can fail to be deeply interested in the new American Institute of Physics, which was established a few months ago, with Prof. Karl T. Compton, president of the Massachusetts Institute of Technology, for its chairman, and Prof. George B. Pegram, head of the department of physics in Columbia University, as its secretary. This is in line with the policy which has been pursued by American chemists, in forming the American Chemical Society, which now has 20,000 members.

One object of the new Institute will be to combine, to a large degree, the memberships of the twenty or more societies which are now dealing with the various branches of physics (the American Physical Society, the Optical and Acoustical Societies of America, and so forth) into one large and powerful organization, and to correlate the results of their endeavors.

The second highly important aim is to assimilate and make scientifically respectable the work of the thousands of highly skilled and intelligent physicists who are now working in commercial institutions and bringing forth information of the highest importance, which has, heretofore, been largely excluded from the general mass of available knowledge, as being, in

some way, less worthy, because the work was done for the personal profit of some individual or group, rather than in one of the great or small endowed institutions.

The third purpose is of no less moment than the other two, being to inaugurate the publication of a great and authoritative journal (with the assistance and financial backing of the Chemical Foundation, which has already been such a large factor in the field of scientific publication), which will bring to American physicists, directly or in abstract, the entire current literature of the subject, both foreign and domestic.

As a branch of this literary division of the Institute's activities, a committee on popular information is to be established, whose duties will be to state the facts of the newer discoveries in terms which will be readily understood by intelligent laymen, and to bring this information to the public through the newspapers and general magazines.

The physicians of this country should, and no doubt will, watch the progress of the Institute of Physics with keen and sympathetic interest and will cooperate with it in every way which lies in their power.

Man's apprehension of truth is not constant: it ever changes with man's advance in knowledge.—
Miriam I. Wylie.

WHAT AILS MEDICINE

GLOOM as to the future of their profession seems to pervade the thinking of many physicians, and much is being written as to the whys and wherefores.

As a matter of fact, medical practice appears not to be in so healthy and robust a condition as one could wish, and so, as with any other ailment, the sincere and intelligent physician should set about making a diagnosis of the malady and evolving a method of treatment.

The diagnosis of the present medical disorder is twofold: the underlying complaint and the acute, intercurrent condition.

As to the latter, a good friend of ours—a keen, intelligent fellow—told us the other day that he was going to close the office he opened about a year ago and hunt a teaching or some other kind of snug job where he would receive a pay check.

We asked him why.

He replied that his practice had begun fairly encouragingly and that he had saved a few dollars, by the practice of rigid thrift. Then the bank where he had his money on deposit closed its doors. Many of his patients used the same bank, so they were as badly hamstrung, financially, as he was. He remarked that, for a month or more he had not been paid for more than ten percent of the work he had done, and that he couldn't live on that, even with the most painstaking economy.

That is a reasonably typical case of the present acute fiduciary illness, not only of Medicine, but of all lines of human endeavor. We, as physicians, had little or nothing to do with it and can do little or nothing, directly, to improve it. Indirectly, the stressing of *preventive medicine* will be helpful.

The basic, chronic lesion is more deep-seated and more personal to us. In these days of increasing cooperation and group activities, we are, in general, rotten bad cooperators. We tend to play a lone hand, be jealous and suspicious of the other fellow and, when it comes to organized work for the profession as a whole, to "let George do it."

We have taken so many cracks on the nose, from politicians, uninformed and prejudiced laymen, heavily endowed insti-

tutions and grossly ignorant fanatics, and pretended to like it, that the point seems to be coming when we really *will* like it—and then our present professional structure will come down with a crash to make way for something more efficient, if far less satisfactory.

The treatment suggested has three parts: first, quit heckling each other and spend that wasted time and energy in telling the people the *truth* about what medicine is doing; second, set aside a *definite period each day*, to be spent in a *consistent, planned effort* to make ourselves *better doctors*, individually; third, stop crabbing about the inadequacy of the medical organizations and *get into them and work*, to make them what they should be; or, if they seem to be absolutely hopeless, spend even more effort in starting something that will meet our needs.

No man ever lifted himself over a gate by his boot-straps. Nobody ever made a success without *work*. If we wait for somebody else to make us all nice and comfy, we will wait until the devil is dead and *hell is half full of holy-water*.

Here is a prescription which should prove helpful:

R Courage
Vision
Industry
Enthusiasm
Cooperation
Intelligence
Helpfulness—āā equal parts.

Sig.: Mix well, and use large doses, internally and externally, several times every day until further orders.



LEADING · ARTICLES

Sphenopalatine Treatment in Affections of the Trunk and Extremities*

By Hiram Byrd, M.D., in Collaboration with Wallace Byrd, A.B.,
Detroit, Mich.

IT SEEMS incredible that the local application of anesthetic solutions in the nasal cavity could yield any therapeutic success in affections of the trunk and extremities. More than 10,000 instances of the arrest of remote dysfunctions by such means have, however, been recorded, and of that number, dysfunctions of the trunk and extremities make up approximately half.

These dysfunctions were arrested by placing a pledget of cotton bearing a concentrated solution of a local anesthetic in contact with the nasal mucosa where it covers the sphenopalatine ganglion. The technic of the procedure is simple and, with a little practice, may be mastered by any physician.

The author's technic for anesthetization of the sphenopalatine ganglion (quoted from the *Journal of the Michigan State Medical Society*, 29:294, April, 1930) is as follows:

"Armamentarium: An applicator, absorbent cotton and solutions of epinephrin and Butyn. The applicator is of aluminum and slender, with about a centimeter of the handle bent to a right angle, and about two centimeters of the tip subjected to heat to secure pliability. The cotton should be of long fiber, the epinephrin 1:1000, and the Butyn, a 50-percent aqueous solution.

"Technic: A pinch of cotton is wound upon the tip of the applicator into a smooth, compact spindle about five millimeters in diameter at the center. This is dipped into the epinephrin solution and squeezed dry between the forefinger and thumb, so as to flatten it in the same plane with the bent handle. At the same time the tip is bent to an angle of about thirty degrees in this plane. Two drops of Butyn solution are added, and the applicator is then ready to be placed.

"Standing on the right side of the patient, with the left forearm resting upon the patient's head and the left forefinger slightly raising the tip of the nose, the operator introduces the applicator, coaxing it along the floor of the nose or wherever its passage is found to be easiest, to a depth of about two and three-quarters inches, when it will be felt to come into the open space of the naso-pharynx. The curved tip is then rotated outward to an angle of about forty-five degrees, when it makes contact with the pharyngeal wall. It is left in this position for about five minutes, close watch being kept during this time to see that contact with the wall is continuous, when anesthesia of the sphenopalatine ganglion should be complete.

"Caution: During this process, close observation should be made of an untired patient and should any pallor, nausea or other untoward symptom supervene, the test should be discontinued."

The fact that occasionally a nasal passage is found which at first seems too tortuous or occluded to make this procedure feasible should not discourage the physician, since in many of these difficult cases the epinephrin in the solution used will in a few moments shrink the tissues sufficiently to permit the application to be gently brought to place. Neither should he be discouraged by the fact that in some individuals the sphenopalatine ganglion is situated somewhat deeper in the tissues than in others, since by retaining the concentrated anesthetic solution in place a few minutes longer, greater penetration is obtained.

While the life of the local anesthesia thus applied is, of course, only about four hours, it does not follow that a dysfunction arrested by this means will return at the end of four hours. Experience shows that it may not return for many hours, days or weeks, or indeed, it may remain in abeyance indefinitely. For example, lum-

*From the Jefferson Clinic and Diagnostic Hospital. (Published after Dr. Byrd's death.)

bago is usually arrested by anesthetization of the left sphenopalatine ganglion, and in many cases, after the first anesthetization, no further treatment is necessary.

This is not a matter of "masking symptoms." The fact that not only sensory but motor and secretory dysfunctions are among those arrested, saves us from the hasty interpretation that we are merely blocking the path of sensation. Evidently the principle involved is more fundamental. These phenomena may prove valuable in future studies of the nature of nerve impulses, and should not be overlooked whenever the functioning of the nervous mechanism as a whole is considered. They may even be of biologic import. However, with theoretic and scientific considerations aside, the simple procedure of intercepting the passage of nerve impulses over the sphenopalatine ganglion is a most useful addition to the medical armamentarium and provides the physician with a gratifying method of treatment for a certain proportion of cases throughout the list of dysfunctions that have been thus arrested.

Of all the profession, it is the general practitioner who can achieve the greatest humanitarian gains by sphenopalatine treatment. Alcohol injections* by the specialist are but occasionally indicated. The great preponderance of therapeutic benefit is obtained, not with the needle, but with the applicator and pledget of cotton. Indeed, this major field of humanitarian contribution is hardly accessible to anyone except the general practitioner, for it is he who is in closest contact with the aggregate mass of human affliction and who, by means of the sphenopalatine test,† is enabled to sift out those cases in which success may be gained so easily.

*The terms *anesthetization* and *injection* should be carefully distinguished. In this paper *injection* will mean injection with alcohol, a procedure accomplished with a needle and requiring a high degree of technical skill. As is well known, the effect of injecting a nerve with alcohol, if the injection is accurate, is to defunctionize it for ten months to a year. On the other hand *anesthetization*, described in the quotation above, does not involve the use of a needle and may be accomplished by almost anyone. Its effect is to defunctionize the ganglion for the brief life of the local anesthetic, about four hours. *Anesthetization* and *injection* are thus contrasted in procedure and in duration; but in one respect they are alike; their effect, whether short or long, is to render the ganglion impervious to the passage of nerve impulses.

†By *sphenopalatine test* is meant anesthetization of the sphenopalatine ganglion during the active presence of a remote dysfunction, for the purpose of determining, in the particular case, whether the dysfunction is arrestable by this procedure. We regard the first anesthetization, not as treatment, but as a test. If the dysfunction is arrested, subsequent anesthetizations, whenever it returns, are indicated as the next step in treatment.

DYSFUNCTIONS ARRESTED

The first recorded instance of a remote dysfunction arrested by anesthetization of the sphenopalatine ganglion was a headache relieved by Sluder¹, in 1903. For a number of years, however, it was not supposed that dysfunctions beyond a small radius about the nose and in the head were thus arrestable. Only during the ten years just passed was the observation extended to include a wide range of dysfunctions in the trunk and extremities. Of these the more important may be listed as follows:

- Angina pectoris (Heitger², Byrd¹)
- Hypertension (Warren³, Ryerson⁴ and Byrd¹)
- Buerger's disease (Chester⁵)
- Tachycardia (Goldschmidt-Osmund,⁶ Byrd¹)
- Cardiospasm (Ruskin⁷)
- Dyspnea (Byrd¹)
- Hiccup (Hansel,⁸ Rehfeldt,⁹ Costen,¹⁰ Byrd¹)
- Asthma (Sluder,² Gundrum,¹¹ Byrd¹,¹²)
- Chronic inguinal distress following herniotomy (Byrd¹)
- Diarrhea (Sluder²)
- Pain of renal colic (Chester⁵)
- Pain of gall-stone colic (Chester⁵)
- Frequent micturition (Sluder²)
- Pain of cystitis (Sibley¹³)
- Pain of ovaritis, (Warren³, Byrd¹)
- Dysmenorrhea (Warren³, Byrd¹, Gundrum¹¹)
- Vomiting of pregnancy (Warren³)
- Chronic tender spots at cervical lymphatics, breast, larynx, lower border of ribs, coccyx (Byrd¹,¹⁴)
- Pain of cancer of uterus, breast, larynx, and just below the clavicle (Byrd¹,¹⁵)
- Sciatica (Ruskin,⁷ Byrd¹,¹⁶)
- Lumbago (Sluder², Saunders¹⁷, Byrd¹,¹⁸)
- Polyneuritis (Byrd¹,¹⁹)
- Pleurisy (Byrd¹,²⁰)
- Pain of arthritis (Byrd¹,²¹)
- Pain of gout (Byrd¹)
- Pain of bunions (Byrd¹)
- Pain associated with flatfoot (Byrd¹)
- Writer's cramp (Sluder²)
- Professional cramp (Sluder²)
- Motor weakness of the forearm (Sluder²)
- Chorea of the arm and leg (Byrd¹,²²)
- Vertigo (Sluder², Byrd¹)
- Nausea and vomiting (Sluder², Byrd¹)
- Pain and soreness of a surgical and infected hand (Byrd¹,²³)
- Pruritis vulvae (Byrd¹)

Acute hyperthyroidism (Jensen and Byrd¹)

Eczema (Gundrum¹³)

Intercostal herpes zoster (Ruskin¹²)

In addition, many less sharply defined dysfunctions have been arrested by sphenopalatine treatment, among which are included a wide variety of neuralgic and rheumatoid pains throughout the trunk and extremities, observed by Sluder², Byrd¹, " ", " " and others. A good conception of the wide range of dysfunctions that have been arrested by anesthetization of the sphenopalatine ganglion is given in Dock's masterly paper read before the American Medical Association in September, 1929¹⁴.

PROPORTION OF CASES BENEFITED

It is not to be inferred, however, that these dysfunctions are thus arrestible in every case. Of any two cases, outwardly indistinguishable, the one dysfunction may be completely arrested and the other not affected. For example, a recent case of sciatica (H3260) of some six months duration was given immediate and complete relief by the first anesthetization for more than twelve hours, and after three anesthetizations has been free from the malady for now more than four months. Another case of sciatica, tested on the same day, though outwardly indistinguishable, was intrinsically different, and was not affected in the slightest degree.

Of the dysfunctions given in the list above, it may be said in general that about one-fourth or one-fifth of the cases encountered prove arrestible at the first sphenopalatine test. An exception is lumbago, which is arrestible in an ample majority of cases. Dr. D. U. Saunders, of Eloise Infirmary, where anesthetization of the sphenopalatine ganglion for lumbago is now a routine procedure, informs us that some three-fourths of the cases are relieved. Intermediate between lumbago and the other dysfunctions mentioned, in percentage of cases relieved, would seem to be angina pectoris. Asthma on the other hand, seems to fall a little below the general average.

CHARACTER OF THE RELIEF

The relief obtained by anesthetization of the sphenopalatine ganglion is generically different from that obtained by the administration of drugs. It comes on more rapidly, is complete, and is not accompanied by any unnatural sensations. Ex-

cept in a few types of cases, the patient feels as if the dysfunction had never existed. These exceptions are dysfunctions in which, for mechanical reasons, a residuum of disturbance remains until physiologic repairs can be effected. For instance, where postoperative pain¹ is relieved by anesthetization of the sphenopalatine ganglion, the wound is still sensitive to pressure. In arthritis, where hyperplasia has supervened, the joint, although relieved of its active pain and as freely flexible as its mechanical status will permit, continues slightly tender to pressure for some time, until regression can take place. In asthma, after the dyspnea is arrested, the excess secretions in the lungs continue to cause some local irritation until they are coughed up. In dysfunctions like sciatica or chorea, however, that do not involve such mechanical features, little or no residuum of discomfort is discoverable and the general rule is observed, that the patient feels as if the dysfunction had never existed.

APPROACH ALWAYS UNILATERAL

Relief, when it is obtained, comes from anesthetization of either the right or the left ganglion—never from the two interchangeably. Only one ganglion, therefore, should be anesthetized at a time. If a dysfunction is arrested by the interception of nerve impulses passing the right sphenopalatine ganglion, it is futile to anesthetize the left, or vice versa. However, cases have been observed in which one train of symptoms was arrestible at the right ganglion; e.g. asthma, and another train of symptoms at the left; e.g. uncontrollable paroxysms of coughing. Such cases may be considered as suffering from two affections and treated accordingly. They serve well to illustrate the clearcut and definite nature of sphenopalatine treatment.

DIRECTIONS FOR THE SPHENOPALATINE TEST

Given an untried case, the practitioner should determine as early as possible which, if either, of the sphenopalatine ganglia is strategic. This can be done only in the active presence of the symptom, and some care must be exercised in examining the patient to determine whether the symptom is active at the time.

One of the sphenopalatine ganglia should now be anesthetized, but the other should not be disturbed until the test with the first is complete. If relief that is distinct

and unmistakable is not obtained within five minutes, by the watch, from the placement of the anesthetic, the test may be counted negative and the intra-nasal application withdrawn. The same test on the other side should now suffice to determine whether sphenopalatine treatment is of any avail in the case. After one such examination, well conducted, there is no excuse for anesthetizing the wrong ganglion, or indeed, for anesthetizing either in case the results of both tests were negative. Only those cases in which clear and unmistakable relief is obtained should be given further sphenopalatine treatment.

A good rule is never to count a sphenopalatine test positive unless there is complete cessation of the dysfunction within five minutes from the placement of the anesthetic, and unless this relief lasts at least four hours (the life of the local anesthetic).

Cases will be found in which the relief is convincing to the patient, but in which close questioning reveals that it is really only partial. Such cases may be counted negative, in accordance with our experience that subsequent attempts to arrest the dysfunction prove less and less successful in all cases where the original relief was not complete.

CLASSIFICATION OF CASES

Upon the basis of the tests just mentioned, the practitioner should separate his cases into two main classes: those in which sphenopalatine treatment is futile, and those in which it is indicated.

A.—Sphenopalatine treatment futile.

This class includes:

- 1.—All cases in which no relief is obtained from the first sphenopalatine test (right and left).
- 2.—All cases in which the relief is only partial.
- 3.—All cases in which the symptom reappears within less than about four hours; i.e. while the pathway of nerve impulses via the sphenopalatine ganglion is still blocked.

B.—Sphenopalatine treatment indicated. This class includes only those cases in which the symptom is relieved completely and for a period of four hours or more. In their subsequent course these cases fall into three groups:

- 1.—Those in which the dysfunction, once arrested by the sphenopalatine test, remains in abeyance indefinitely.

With these no further treatment is necessary. A large proportion of lumbago cases belong to this group.

2.—Cases in which the sphenopalatine test is positive for a period, but subsequently becomes negative. With these, further sphenopalatine treatment is useless. They should be referred to the ordinary course of treatment, as any other case negative to the sphenopalatine test.

3.—Cases in which the sphenopalatine test continues to be positive and the dysfunction continues to return. These are suitable for injection of the strategic ganglion with alcohol, and should be referred to one experienced in such injections.

DIVISION OF LABOR

All cases except those in the last subdivision may appropriately be treated by the general practitioner. The simple procedure of anesthetizing the sphenopalatine ganglion, in the hands of the physician of the first instance, should be used, not only as a preliminary test and as a therapeutic device in cases that show a positive reaction, but should further serve to indicate those cases which call for alcohol injection. The practitioner, therefore, need not refer cases to the specialist until he has first made tests over a period of weeks, showing that alcohol injection is indicated. Indeed, this division of labor will benefit, not only the practitioner, but the specialist in nerve injection as well, since the latter will not be put to the embarrassing necessity of either injecting without a sufficient basis of preliminary tests, or declining to inject until he can make these tests over a considerable period.

SUMMARY

Anesthetization of the sphenopalatine ganglion is therapeutically applicable in a majority of cases of lumbago and in a smaller proportion of cases of the other dysfunctions enumerated. Thus, in contrast with most therapeutic procedures, it is applicable, not to all cases of one malady, but to a certain proportion of cases of many maladies. For every five affections of which it relieves one-fifth of the cases, it shows a therapeutic usefulness equal to the relief of all cases of one.

Although sphenopalatine treatment yields only a moderate proportion of successes in most of the affections considered, the range

of its applicability is so wide that its sum total of success is ample ground for its constant use by everyone engaging to treat affections of the trunk and extremities. No cases should be allowed to pass through one's hands that are relievable by so simple a procedure.

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2201 E. Jefferson Ave.

The Associated Press and Science

By Howard W. Blakeslee, New York, N. Y.

Science Editor, Associated Press

DR. H. RIES, Cornell University geologist, was answering my verbal request to write a brief article for the Associated Press.

"We have been giving some radio talks up here," he said, "in which we were instructed to talk for 12-year-old intelligences. Now, if I write for the Associated Press, can't I speak to the 13-year-olds—and up?"

The answer was yes. Dr. Ries wrote the article and the newspapers printed it widely. But not long ago nothing of the sort would have been considered possible. Newspapers were accustomed to throw the writings of scientists into the waste basket because they were "long-winded."

Dr. Ries told his story about geology at a length not much over that of Lincoln's Gettysburg speech. So likewise, at the same time, nearly a score of other scientists wrote brief "news" stories of their particular fields for the Associated Press.

Their brevity was not the only surprise.

They wrote in response to a short written request from the Associated Press inviting them to contribute to a pioneer field in press association endeavor. As recently as two years ago this request would have required reams of letter writing and then a personal call to interest them.

And their answer—how often I have listened to it!—would have been that the story could not be done so briefly. Then, being scientists, they have admitted that, as nothing may be impossible, it might be done, but be very sure they were not doing it.

SCIENCE COMES TO THE "A.P."

A change has taken place. This article tells of the part the Associated Press is taking in the change.

Science came to the Associated Press through a newspaperman. Back in 1912, Kent Cooper, then one of the young men in the A.P., was one day watching a test of a Morkrum automatic printing machine.

These machines look like typewriters. Connected with a telegraph wire, they automatically type messages transmitted by electrical impulses from a sending point hundreds of miles distant.

But the Morkrum at which Cooper looked was not connected with any wire. It was not hooked up with anything visible or tangible. Yet there it sat on a table typing a news dispatch all by itself. The machine was demonstrating a first test of wireless transmission of automatic printing. The sending machine which actuated the keys was 20 miles away.

To the A.P. executive came the thought what a great "news" story science would be. But Cooper at that time was not in the news department; He was in charge of the wires. So he waited.

Eight years later he sat at a conference with the head of the Western Union and the head of Stevens Institute. They were talking about the influence of news stories in aid of raising funds for scientific research. The scientist remarked that the public little realized what research was doing for human comfort, happiness and prosperity.

"Folks even sleep better," said he, "because of scientific studies of bed springs."

Again, to Cooper, came the vision of a news field in science. He still had no authority over news, but five years later he became general manager of the Associated Press, with full charge of the news. One of his earliest moves was the establishment of a science department.

The reception by members of the Associated Press was cordial. Some of them already had experience with news stories of science, developed both in the Associated Press and outside, particularly by Science Service, the *New York Times* and special news writers.

NEWS WRITING A SPECIALTY

The first problem of the Associated Press management was the selection of writers for science. Should they be scientists, or to some extent scientifically trained? It may seem strange that the choice finally was based upon quite different qualifications, regarded as more important. This qualification was training in news writing, with emphasis upon ability to write well. News writing is a specialized field, its history long, its scope perhaps the broadest of all professions, its effects direct and

sometimes devastating and even its choice of words different.

Press association writing, the work of the Associated Press, is a graduate school of news, its writing still further specialized. It must fit the needs of daily papers throughout the country, competing for its place in newspapers which use it only because it is sufficiently timely to crowd some other piece of news into the waste basket.

Knowledge of science does not equip a writer to know when and how his scientific article is news. That is done only by training in news writing. It is like the difference between butane and propane. Butane is made of four atoms of carbon and 10 of hydrogen. Knock off one carbon atom and two of hydrogen and you no longer have butane, but propane. So it is with news. Alter a few words, and the article may be one of various good things, but it is no longer news.

So all the personnel of the science department of the A.P. have been men selected from the service. They have gone to the scientific world in effect with this message:

"We are scientists in one field. We know how it must be written if it is going to be printed in newspapers throughout the country."

But how can men unfamiliar with science write about it correctly? There are two parts to the answer: First, as A.P. writers, these men are trained to hold accuracy supreme. To them nothing is news until it is stated accurately. Their life training is to meet new situations in unfamiliar fields, and to learn how to depict them accurately. So the management had justification for its faith that its writers would report science correctly.

The second part of the answer is a matter of technic. I am acquainted personally with every one of these men, and I know how they did it. The principal part of their success lay in *taking time*. By time I do not mean simply a lapse from the 13th of one month to the 13th of the next; I mean time *actually spent in concentration*, minute by minute, first to understand, and then to write a clear account of scientific work. On rare occasions, minutes have sufficed, but more often the cost in time is hours; sometimes days. No price in time or labor is considered too high.

The reward is this. When a piece of

scientific work is at last clearly explained, it never fails to be fascinating.

We hear much about "popularizing" science. I do not like that term. To me it is misleading. Painting lovely word pictures—jazzing it up, as we say in the news room—can make good reading of science and so "popularize" it. But that doesn't get science anywhere.

Science is real, part of daily life, of the very routine of each day, and without it a large portion of the earth's population could scarcely hope to live for long. It is only necessary to tell the story of science clearly and accurately, and people in all walks of life reach out for it eagerly—even the 12 and the 13-year-old intelligences.

I think it can be shown now that the simple clearness of the news page style is accepted by a court of high resort, the scientists themselves. Try your hand at guessing what manner of men wrote the examples which follow.

Two years ago the chemistry department of the University of Illinois developed an apparatus for recovering methane from cornstalks. A farmer could install one of these scientific stills, feed it cornstalks, and the molds and bacteria would go to work producing methane from this waste.

Now methane is marsh gas and useful for heating. Here was a method such as never existed before for getting methane from cornstalks cheaply—something new in the world.

It is rather involved to explain methane. A man starting an account of this development, looking for the simplest way to make it clear, called it "cornstalk gas for the farmer's heating and cooking." Perhaps no one before had heard of "cornstalk gas." It struck the imagination, yet it was clear and accurate.

Last winter, in New York, a man described electric current—the property commonly called "the juice"—as a stream of electrons flowing through a wire, like sand flowing through an hour glass.

Somewhat earlier, another man defined quanta, the divisions of radiant energy, in terms of slot machines. Only a penny, said he, will get you gum from a penny slot machine. All the dimes or dollars in the world will not release a single piece. Quanta of energy, he explained, work like slot machine coins, each quantum fitting certain conditions, but passing by everything else.

All three of these explanations are in

news style, but only one of them was coined by a newspaperman. The other two came from scientists. Cornstalk gas came from the newspaperman; the electric sand from a speech by Dr. Karl T. Compton, President of Massachusetts Institute of Technology; the slot machine quanta from Sir James Jeans, British astronomer.

KING PRAJADHIPOK'S OPERATION

Few scientists develop this knack of graphic explanation. Rather are most of them like Dr. John M. Wheeler, the New York surgeon, who removed the cataract from the eye of King Prajadhipok, of Siam. The Associated Press was represented at that operation, and it is no violation of confidence now to relate an anecdote of the fine, old-school ethics of Dr. Wheeler.

Night Executive News Editor J. M. Kendrick, of the Associated Press, in whose "time" the operation would fall, decided that the event was worth expert reporting—that the story of the operation ought to be explained by a qualified medical eyewitness. Under most circumstances no physician feels free to agree to such a request; but the A.P. suggested to the New York Academy of Medicine the desirability, from the point of view of American medicine, of having a physician report this operation. A king had travelled half way around the world to place himself in the hands of these American professional men. The Academy agreed and assigned to the work its executive secretary, Iago Galdston, M.D.

On the Sunday of the operation I was invited to go along with Dr. Galdston to Ophir Hall, the King's American residence, home of the late Mrs. Whitelaw Reid. My function was simply that of technical advisor about details of filing a hot news dispatch. I did not write the story.

Dr. Galdston attended the operation. Afterward I was present when he and Dr. Wheeler sat down in Mrs. Reid's beautiful library. Dr. Galdston drew from a desk some Ophir Hall social stationary, poised a pen above it and said, "Now Dr. Wheeler, will you tell me the steps in the operation?" The question was asked to verify Dr. Galdston's own impressions of what he had seen.

"Well"—replied Dr. Wheeler—"well, the less said about it the better."

That reply—"the less said the better"—

long has been the answer of science to the news man, and still is, to a large extent.

Dr. Galdston, smiling, questioning, persuaded Dr. Wheeler to answer further; while I chuckled to see a scientist in the predicament that newspapermen regularly expect to face in science, and especially in medical science.

The story which Dr. Galdston wrote made almost every front page in next morning's A.P. papers. But this, say some of my scientific acquaintances, is an exceptional case. And why should a scientist spend his time giving information to newspapermen?

PUBLICITY AND RESEARCH ENDOWMENTS

One reason is to obtain more support for scientific research. The news man talks to all the public, gives the message about the scientist to everyone—bread on the waters. As one delightful scientist expresses it:

"There are angels flying all around, looking for a nest to drop their eggs. We never can guess just what incident is going to cause them to choose where to place their money."

These "angels" do not act without rather vivid impressions about scientific developments. The daily press is a very good source of the vivid impression—one that hits and sticks like a hot arrow.

I'll tell you a little later about some of the scientists' favorite methods of disseminating information and how they are like cold potatoes.

Different scientists say it is better for the press to obtain its information from well-purified sources. They hold that the scientists should tell the story only in scientific publications and in technical language. Teachers should be developed, they hold, to interpret this language and to retail the information to the public—particularly to the press.

But science is too important in daily life to risk such indirection or to escape direct contact. It is not undignified for the President of the United States to deal directly with the newspaper; and it should not be so for science to do likewise. Some of the most influential men in science have come to this point of view and are directing their contacts and the work of their organizations accordingly.

One of the best evidences that they are right is the changed attitude of the press itself. A few years ago, most city editors

and reporters seldom or never attempted to "cover" a science story without poking fun. That was in the era when a certain great and supposedly conservative newspaper, having an article about some diet experiments on a mule, conducted by a famous medical scientist, put forth this headline:

"Hee Haw Maud and Prof. . . ."

Since that day the press has done a right-about-face in its attitude toward science. Clear and serious stories of science are among the most welcome of news dispatches throughout this country.

A few years ago a group of scientists proposed furnishing this type of serious scientific articles to the press. Their plan did not work at the time; it was not welcomed by the press, and it was necessary to employ rewrite specialists.

How complete is the revolution since then may be judged by the source from which arose the series of articles written by scientists for the Associated Press, mentioned at the beginning of this article. The idea for this series did not come from a scientist; nor even, I confess, from a science editor of the A.P. It sprang from a wholly lay newspaperman, Charles E. Honce, Day Executive News Editor of the Associated Press. Honce said:

"People are interested in what's going on in the world. Ask the scientists to tell us some of their doings."

The series resulting from this order made one of the biggest hits in the long experience of the A.P.

It is not alone science writers in the Associated Press who handle scientific news. This subject seems to have developed self-starting propensities. A.P. staff writers throughout the world have picked it up enthusiastically. They develop news contacts with scientists like those they have with world leaders in politics, finance, sports, the arts and other fields. More than one member of the A.P. foreign staff has a personal acquaintance with the Einsteins.

Nor does the interest end with the writers. The A.P. news photo and the news mat services are telling the science story in pictures. Some of the A.P. artists—the men who draw sketches and cartoons—are head-over-heels into science. Their desks are near mine. They borrow my books to "read up" and then come around to offer suggestions about stories they think I might well write in the news.

It may come as a shock to some scientists to be informed that these newspaper artists do creative work in illustrating science. One of their sketches shows the Pacific ocean mapped with two "deserts" in its middle, one an area of almost oxygenless water; the other an expanse of phosphate deficiency. The picture is unusual—good "news art"—but it is something more. Dr. T. Wayland Vaughan, director of the Scripps Institution of Oceanography, at La Jolla, California, where we obtained most of the ocean data thus illustrated, thought so well of the water desert drawing that he wrote me he expected to use it in an explanatory exhibition of some of the Institution's work.

In the A.P. files there are numerous letters telling of constructive returns to research work coming from Associated Press science news stories. One letter concerns a story about growing bigger and better baby chicks at Pennsylvania State College by feeding them tobacco of high nicotine content. The scientific objective was protection against a prevalent fowl disease.

It might be imagined that the news method of telling this story, which led with a minor startling fact about baby chicks eating tobacco, would have no scientific value. The reverse occurred. Dr. D. E. Haley, conducting the experiments, wrote me that, previous to the appearance of the A.P. story, the facts, published in regular scientific bulletins, had attracted little attention. But this single news story had resulted in the receipt of so many letters of inquiry from poultrymen, scientists and farmers that he believed this chicken malady would be eliminated in the United States, with savings of large sums of money.

Another letter—this one written by a layman—says, concerning a different story:

"Just another case of a paragraph in the newspaper being worth infinitely more than a dozen technical papers in disseminating information."

That is what I mean by the "cold potatoes"—cold at least to the great reading public.

Instances of praise for quick results of news stories might be multiplied, coming from a wide range of institutions, but I prefer to finish with one on the other side.

At the Yale nutrition laboratory of Dr. Lafayette Mendel I wrote a story about diet experiments upon white rats. The "lead" was an observed fact that a menu extra-rich in sugar was the least fattening diet obtainable for certain rats. When this story was submitted to Dr. Mendel for approval, he wrote:

"My dear Mr. Blakeslee—I regret to inform you that your story is a flop."

I had misunderstood the entire purpose of the work. He explained why. We did not use the sugar story, but wrote a complete new story based upon this clearer understanding. This second article Dr. Mendel said was correct and the A.P. used it.

I think this illustrates the most important factor in our science reporting. We do not always, at first writing, get these, to us, strange new facts, entirely correct. But our correspondence will testify that we get rid of these errors before the stories go out into our news report for distribution over the great Associated Press network.

Many of these stories go completely around the civilized world. I know of no more severe test of their accuracy and quality. They have earned for us the confidence of an increasing number of scientists and, what is more desirable, their cooperation in making news of science.

383 Madison Ave.

LIVING LONG OR WELL

We have put too much emphasis upon the length of life. Not how long we may have lived, but how much, is the real point.

It is not the length of a piece of cloth that is admired, but the bright colors, the beautiful design and the rich, soft texture.

It is better to have lived happily and well, than merely to have observed a hygienic regimen for a century or two.—DR. THURMAN B. RICE.

Prenatal Syphilis*

By Abr. L. Wolbarst, M.D., New York City

ACCORDING to the U. S. Public Health Service, there are at least 425,000 new cases of syphilis annually in the United States. Eugenics is interested in syphilis because this disease, not only maims and kills its victims, but in addition, may be transmitted to the offspring of syphilitic parents. And because much of this parental infection is preventable, the mere fact that we are discussing syphilitic heredity is itself an indictment of our inability or unwillingness to face disagreeable facts, especially when they are colored with a religious or "moral" significance.

We speak of this second-generation syphilis as "hereditary" or "heredo-syphilis" but, in the strict sense, both of these terms are misnomers. This condition has nothing whatever of the nature of heredity. "Transmitted" syphilis would be a more correct term, because the mother actually transmits the living parasite of the disease to the child.

The syphilitic mother is the usual source of infection of the child. In the mother, the disease may be classified as acquired or conceptional. In the former type, manifest symptoms of an active infection are generally present and the diagnosis is unquestionable; in conceptional syphilis, however, which is the more serious type, there are no signs of the disease during the child-bearing period, but the woman gives birth to premature, still-born, constitutionally inferior or diseased children. These women are usually the wives of men who have had syphilis, but were inadequately or improperly treated, and believed themselves cured. It is not an uncommon experience to find that the first intimation or suspicion that the woman has syphilis is the discovery that she has given birth to a syphilitic child; but the blood Wassermann reaction has effectively demonstrated the presence of latent syphilis in the large proportion of these apparently healthy mothers of newborn syphilitic children.

Pregnancy seems to confer a degree of immunity on the woman with conceptional syphilis, as a result of which she presents no

evidences of the disease in her own person during her child-bearing period. An interesting phase of this immunity is seen in the general rule that the mother may suckle her child, which shows evidence of active syphilis, without herself becoming infected; whereas the same child, put to the breast of a healthy wet-nurse, will generally infect her. On the other hand, a syphilitic mother may bear a healthy child, which she may nurse without transmitting the infection. It need not be emphasized that there are frequent exceptions to these general laws.

The role of the father in the transmission of syphilis is not definitely established. It has been demonstrated that the sperms of the syphilitic male are abnormal in structure. It is conceivable, therefore, that an abnormal tendency in the development of the fetus may possibly be transmitted, either through abnormality of chromosomes or of function; but there is no convincing evidence that direct paternal transmission occurs.

In this connection, it is well to remember that the spirochete is from 6 to 8 microns in length while the length of the sperm head is but 2 to 3 microns. It is difficult to see how so large an organism as the spirochete can introduce itself into the head of the sperm, which is only one-third its size. If, however, the existence of a rest or intermittent form of the spirochete can be established, it will then be rational to accept the possibility of direct paternal transmission.

Within the limits of our present knowledge, therefore, we may say that all available evidence points conclusively to the transmission of syphilis to the fetus through the placental blood of the mother. What she transmits is the actual disease itself, not merely a susceptibility, as in true heredity; and what follows in the life-history of the child is inherent in the nature of the disease.

Voluntary sterilization or "precautionizing" of every syphilitic, even though pronounced cured, would constitute an ideal eugenic procedure; but it would be too much to expect that human beings will ever be able to renounce their procrea-

*Read by invitation at the Nineteenth Annual Meeting of the Eugenics Research Association, New York, June 6, 1931.

tive instinct, to say nothing of their natural selfishness, even for so humane an ideal. In my personal experience of more than thirty years and hundreds of cases, I have met but two men who persisted in the altruistic determination not to marry, for fear of passing on the disease, despite every assurance that it was safe for them to do so. We must therefore face the fact that syphilitics will marry and bear children; and it is with these children that we are immediately concerned.

As a matter of convenience, we use the term "hereditary" or "heredo-syphilis," to designate the usual type of infection of the child which takes place through the placenta and blood stream of the mother. Less common is that form of transmission known as congenital syphilis, in which the child is infected while passing through the birth passages of the mother, through actual contact with active syphilitic lesions. It is obvious then, that the child born with heredo-syphilis comes into the world after having lived for months in a medium more or less saturated with living spirochetes. If it manages to survive this unhealthy environment, it is either because it possesses an exceptional tolerance to the spirochetal infection or because of an inherent ability to stimulate the defense mechanisms of its body. That these natural forces are not usually called into play, is made evident by the exceedingly high mortality of the syphilitic fetus; fortunately for all concerned, comparatively few survive.

TYPES OF CASES

The pathologic manifestations presented by the heredo-syphilitic child, vary according to the date of uterine infection. The fetus infected early in uterine life presents, at birth, far-advanced symptoms of late or tertiary syphilis. It would seem as if the unfortunate fetus had already lived an entire lifetime in those few months of intrauterine spirochetal environment. On the other hand, the fetus infected late in uterine life, may be born apparently well, but very soon thereafter may develop lesions characteristic of early or secondary syphilis. In both of these types of infection, evidences of the disease fortunately appear in early life and thus make early and successful treatment possible.

There is, however, a more serious type of infection, in which the fetus is in-

fected *early* in uterine life with a comparatively mild degree of virulence. In this "tardive" or "latent" type, there may be no symptoms of the disease except the stigmata of development, which may not appear as active signs for months or years—usually between the 3rd and 28th year. These children have certain well-defined general characteristics. They are constitutionally delicate, emaciated and generally difficult to raise. There is usually an arrested development of bone and muscle structures, so that when they do attain maturity they are undersized and give other evidences of infantilism. The adult male looks like a normal boy of 14, and the women are correspondingly backward in development.

Eugenically, this differentiation of types has only an academic interest. The crux of the matter is that the child comes into human society infected with syphilis. It is of no eugenic value to know how or when the child acquired the disease. It is of the utmost importance, however, to know that, whether children are born with outspoken manifestations or develop syphilitic phenomena later in life, they are nevertheless destined by inexorable fate to go through life with a defective germ plasm and handicapped by their pathologic endowment. This handicap is their syphilitic heritage.

RESULTS

How does this heritage affect the individual and his relation to society as a whole? It is sufficient to say, in reply, that it is from this unfortunate group that society draws a good proportion of its blind, lame and defectives, its delinquents, its economic failures and its public charges. The mere recital of the pathologic manifestations of this heritage is decidedly illustrative. Stokes found the following major conditions in a study of 202 cases of heredo-syphilis:

Eye-lesions, 78 percent, of which interstitial keratitis constituted 52 percent; typical teeth, 32 percent; saddle nose, 30 percent; other nose lesions, 19 percent; mental inferiority, 25 percent; nervousness, 22 percent; syphilitic facies, 21 percent; enlarged liver, 19 percent; enlarged spleen, 14 percent; precocity, 12 percent; nerve deafness, 10 percent; gumma of the nose and throat, 6 percent; periostitis, 3 percent; dactylitis, 2 percent.

In addition to these we find cases of giantism, dwarfism, constitutional inferiority and, most important of all, the evidences of neuro-syphilis—paresis, taboparesis, cerebral arteritis, meningitis, epilepsy and imbecility. All the structures of the body may be involved, especially the brain and nervous system. Once undermined by the poison of syphilis, the deteriorated brain is unable to cope with the jars and strains of civilized life and the result is some form of economic inefficiency, delinquency, insanity or imbecility. Nonne has emphasized the opinion that dementia precox is more frequent in children of syphilitic parentage than in those of normal parentage; and syphilis was found in more or less active form in 6 percent, in a series of 4,400 feeble-minded children. These abnormal phenomena constitute the heritage bestowed on children born with heredo-syphilis.

The interesting fact that 10 or 12 percent of heredo-syphilitic children show evidences of mental precocity, is highly suggestive of the vague and uncertain line of demarcation between the mental defective and the erratic genius. Is it, perhaps, possible that, when the poison of syphilis serves to render the individual abnormal, it may be either to the point of idiocy or insanity, on the one hand, or to the point of genius, on the other? Is it too great a flight of the imagination to suggest that, in rare instances, if the infection be slight or has become attenuated on passing through more than one generation, it stimulates rather than retards the development of the mental faculties?

The experience of the past thirty years in the Welander school homes for heredo-syphilitic children, in Norway and Germany, gives some support to this thought. While it is probably true that these homes are keeping alive children with mental defects which will handicap them in the competition of life, it is equally true that they have proved highly successful in dealing with the superior type of child, often bright and precocious, but handicapped nevertheless by some special disability or complication of syphilitic character, which demands expert attention over a period of years. In these schools, the children are given the persistent and adequate treatment which their condition demands, combined with formal education and healthful surroundings.

MARRIAGE OF HEREDO-SYPHILITICS

Having survived the vicissitudes of childhood and puberty and attained maturity, the advisability of the marriage of heredo-syphilitics must be considered. Undoubtedly, it were better, on general principles, that such individuals did not marry, or if they do, did not procreate. Here again, education tending to the adoption of voluntary sterilization or prevention (if it cannot be made compulsory), would appear to be a logical eugenic indication. But there is another side to the picture. The fact is that many of these heredo-syphilitics do marry and they often bear healthy children. In a study of 250 adults with heredo-syphilis, Sidler-Huguenin found that, while 28 percent of the families were childless and the life expectancy somewhat shortened, the children born were normal; his general conclusion was that there were no serious drawbacks to the marriage of those who have inherited syphilis (Stokes).

The influence of syphilis and heredo-syphilis on human history cannot be estimated; but there can be no doubt that many of history's outstanding figures, who have shaped human events of importance, were either syphilitic themselves or came from syphilitic ancestry. And it is quite possibly true, as Havelock Ellis has pointed out, that, although we fail to realize it, everyone of us must certainly have had a great army of syphilitic individuals among our many ancestors during the past four hundred years.

We can only surmise how and to what extent human conduct is determined and influenced by a syphilitic constitution. For example, no fewer than six kings of England are believed to have died primarily from syphilis, and at least two of these seem to have passed on the infection. Edward III, easily among the greatest of the English kings, and his remarkably able son, John of Gaunt, appear to have died of the disease. Henry VIII had a series of still-born children, a fact strongly indicative of syphilis. Cardinal Wolsey was accused of having given him the disease by whispering in his ear, but, as Haggard explains, there were other more potent and more likely sources of infection than the Cardinal's words. His son, Edward VI, died at an early age of what appears to have been a combination of congenital syphilis and tuberculosis.

His daughter, Bloody Mary, shows in her portraits the facial expression quite typical of the disease; and it may be added that Elizabeth likewise possessed some of the stigmata characteristic of syphilis. Vesalius, the anatomist and physician to Charles V, strongly imputed to his royal patient a syphilitic infection. Ivan the Terrible, of Russia, suffered from cerebral syphilis, and this may very well have been responsible for the orgies of which he was the instigator. There is strong evidence that Pope Alexander VI, the father of the notorious Borgias, was syphilitic. Caspare Torella became his court physician and treated 17 cases of syphilis in the Pope's household, and among these was his son, Cesar Borgia. Other noted syphilitics were Francis I, of France; Herod, King of the Jews; and Benvenuto Cellini. It is quite probable that, if history were carefully ransacked, many other distinguished men and women would doubtless be found victims of this disease, and it is equally certain that some of them must have inherited it or transmitted it. The entire trend of human history might have been different if there were no syphilis, or if an effective cure had been available these four to five centuries.

PREVENTION OF SYPHILIS

Today, however, with syphilis almost certainly curable and with preventive medicine urged as an ideal, the problem of the prevention of second-generation syphilis takes on considerable practical importance. In general, it may be said that early and thorough treatment, with modern methods, is almost certain to effect a cure and thus obviate the possibility of second-generation syphilis. This is well demonstrated in the case of the expectant mother, known to have syphilis. The best prophylaxis for the unborn child is the vigorous treatment of the mother, both during the term of pregnancy and in anticipation of it. To be most effective, however, treatment must be begun in the early months of pregnancy. But the cure of syphilis in potential parents is entirely inadequate in a eugenic program. That is not enough. We must also *prevent* the syphilitic infection of potential parents; this is far more important, and possibly, if we attacked the problem properly, much easier of accomplishment.

The conventional moralist idea of pre-

venting syphilis and other venereal diseases, is to employ the power of the law and the forces of morality toward the suppression of prostitution; this, if one may be permitted to use a facetious term in so serious a subject, is a good trick, if you can do it. But it cannot be done! It were far better if our moral and social forces, instead of devoting themselves exclusively to the well-intentioned but hopeless task of suppressing prostitution and illicit sex relations, were to supplement these efforts by the encouragement of personal prophylaxis on the part of those who expose themselves to the risk of infection.

Within recent years, chemical science has developed certain prophylactic methods which have proved dependable and effective, within reasonable limitations. The widespread encouragement and utilization of these methods would contribute materially to the prevention of those 425,000 new infections each year. Syphilis can be prevented—if not altogether, at least in great measure—by the application of the prophylactic principles which have their basis in the original experiments of Metchnikoff and Roux, and have proven their worth beyond question or doubt; and with the prevention of new infections in one generation, there can be no problem of its transmission to the next.

It is extremely unfortunate that the element of sexual morality has always been tied up with the subject of venereal prophylaxis. To advocate and encourage personal prophylaxis against venereal disease, is to compromise with vice and sin, according to the conventional moralist. And this puritanic attitude accounts, in great degree, for the lamentable lack of progress in the prevention and cure of the venereal diseases, as compared with the marvelous advances made in the conquest of the "respectable" diseases, which have not been branded with the taint of sexual immorality.

When, however, we look, in retrospect, upon the tragic history of syphilis, we cannot fail to conclude that the race can be spared much of this tragedy in the future, if we, of the present day, take proper measures to prevent the spread of syphilis. Merely talking about it and bemoaning the fact, will not bring us anywhere. We must act definitely along constructive lines. And this, by the way,

presents a great opportunity to the eugenicist. He must insist that the fruits of science be utilized to their utmost for the benefit of the race.

Today, we not only can cure syphilis, but we can go far toward its prevention. The handicap of heredo-syphilis can be annihilated, or at least perceptibly diminished, if we will have the courage to face the facts and deal with syphilis as we deal with smallpox, typhoid and diphtheria—as a purely scientific problem, unfettered by religious or moral traditions and emotions, with a single eye to the prevention of infection.

That the encouragement of personal prophylaxis, by chemicals and other measures, might lead to increased sexual promiscuity is, of course, possible, but even such a problematic development would be far outweighed in racial welfare by the diminished incidence of the disease and its correspondingly diminished transmission to the second generation. It might be surprising, to those who oppose the use of chemical prophylaxis on "moral" grounds, to learn that a reliable authority estimates that at least 5,000,000 and possibly 6,000,000 prophylactic "tubes" are now being used annually in this country, exclusive of the Army and Navy, all without the sanction of those who so zealously guard our morals. It would be interesting to speculate on the number of cases

of syphilitic infection these millions of tubes have prevented.

The problem is a simple one, if we dare to concentrate upon the single thought of preventing syphilitic infection, irrespective of all secondary considerations. If we are to accept the principle of "eugenic responsibility", and give it practical application, we owe it to ourselves and to posterity to take the fullest advantage of every possible measure that promises to effect an improvement in the germ plasm of the race, even though such measures involve a departure from or a conflict with cherished conventional traditions of religion and sexual morality.

However important religion and sexual morality may be for the spiritual welfare of humanity, they have no status whatever in a scientifically organized eugenic program, involving the physical and mental welfare of the race. Every measure that can be employed to better the germ plasm of the race must be utilized. It goes without saying, of course, that this includes such well-tried procedures as sterilization of the defective and the encouragement of birth regulation by the masses. To refuse to avail ourselves of these measures, as we have done these many years, for any reason whatever, is an unpardonable disservice to society and a shortsighted denial of the benefits of eugenic science to future generations.

114 East 61st Street.

Prostatic Gland Enlargement

By Edwin W. Hirsch, M.D., Chicago

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WHEN a man reaches the age of fifty, he begins to grow apprehensive concerning his prostate—that important gland located at the neck of the bladder, which plays such a notable part in sexual and excretory physiology. He knows that this gland has a propensity for growing and turning into a tumor, during the latter years of a man's life. Men generally—and rightly so—fear this affection, for an enlarged prostate may project into the neighboring vital organs and seriously interfere with the eliminatory functions.

That prostatic disorders are not uncommon, may be gleaned from the fact that,

in the United States alone, there are about 1,000 physicians who specialize in the treatment of this condition. The number of men affected with prostatic trouble is so large that they are often referred to as the "army of the prostatics." As I shall later show, the comparison is most applicable, for there are more prostatics in the United States than there are soldiers in our standing army. It is evident, then, that this disease, peculiar to the male sex, is of interest and concern to the whole male population above the voting age.

The prostate gland probably gives the male more trouble than does any other organ in his body. But it is not with the

minor disturbances of the prostate, which have been experienced by 65 percent of men above the age of 16, that we are now concerned; it is with the morbid changes which take place in the prostates of men past fifty.

Quite often, in the fifth, sixth or seventh decade of a man's life, the prostate changes and grows in a rather insidious manner. Accurate statistics concerning the prevalence of prostatic tumors are very difficult to obtain, for many men will stubbornly suffer with this malady and die with it, without consulting a physician. Sometimes the prostate will cause serious damage to other organs, and the cause of death many times is listed as of kidney or heart origin, when the fundamental and original cause is the prostate. However, by a careful study of a small group of cases, we can form a general estimate, as it applies to the male population.

In a series of 300 cases, it was found that there was some evidence of abnormal enlargement of the prostate in 34 percent of men above 50 years of age, but in only half that number did the alteration in the gland structure cause any difficulty during life; in only 8½ percent was the disorder serious; and in only a part of this group did the gland have to be removed. So we see that, though the average male has a very good opportunity of experiencing some difficulty with his prostate, he has a fairly good chance of escaping the operation which so many men secretly dread.

When a man enters the fourth decade of life he is entering the danger zone, for it is during this period that the prostate begins to trouble the male sex. Further proof that the prostate begins to enlarge much earlier than was previously supposed is furnished by the following study, which was made by M. Roth, director of the pathologic institute at the University of Basel. In a series of 300 cases, in men varying from 36 to 90 years of age, he found on postmortem study that there was some evidence of prostatic enlargement in 101 cases (approximately 33 percent.) His findings, by age groups are as follows:

36-40 years—51—Prostatic Hypertrophy in	7 or 13%
40-50 years—91—Prostatic Hypertrophy in	23 or 25%
50-60 years—64—Prostatic Hypertrophy in	20 or 31%
60-70 years—55—Prostatic Hypertrophy in	31 or 56%
70-80 years—28—Prostatic Hypertrophy in	14 or 50%
80-90 years—11—Prostatic Hypertrophy in	6 or 54%

One should not infer from these statistics that every prostate showing only a very minute sign of enlargement at the age of

40 would, of necessity, turn into a tumorous growth ten or twenty years later. Many a man lives to a ripe old age without experiencing any trouble, even though his prostate contains the nuclei of tiny tumors, which have remained stationary in size throughout his lifetime.

ETIOLOGY

Most of the old theories concerning the origin of this peculiar form of tumor were conjectural and many of them have been discarded. High living, sedentary occupation, horse-back riding, gout, rheumatism, syphilis, gonorrhea, celibacy or sexual excess, varicose veins, heredity, senility, liver stasis, etc., have been suggested as the causative factor, but without definite proof or foundation. For a time, gonorrhea was looked upon with marked suspicion as the pernicious agent, but after it was demonstrated that many prostatics never had gonorrhea and many gonorrhoics never suffered with an enlarged prostate, the clue was dropped. Moreover, gonorrhea is a disease of early youth, while prostatic tumor usually appears at about the age of sixty or seventy years. It therefore appeared unlikely that a disease like gonorrhea could lie dormant for so many years and then give rise to a tumor mass.

At one time the disease was looked upon as the natural consequence of age. In 1840, Sir Benjamin Brodie wrote, "When the hair becomes gray and scanty; when specks of earthy matter begin to be deposited in the tunics of the arteries; and when a white zone is formed at the margin of the cornea, at this same period the prostate gland usually—I might, perhaps, say invariably—becomes increased in size." But age cannot be considered the sole factor, for the gland often becomes smaller or remains the same size as the years advance, and therefore the enlargement is not the rule.

In searching for a theory to explain the nature and cause of old-age enlargement of the prostate Walker made the significant observation that there was a variation in the incidence rate of prostatic growth among the various races. By writing to the surgeons of all countries Walker obtained some very illuminating data. Surgeons reported that, in Japan and China, prostatic tumors were rare. Dr. Matsumoto reported that, in the records of the out-patient department of the special hospital for urinary diseases at the University of Kyoto,

there was an average of four cases of enlarged prostate per annum, although the total attendance ran into several thousands. Professor Hyami, of the same University, never encountered the condition on the dissecting table. Dr. Koch, of the Government Hospital at Hong Kong, states that during the last fourteen years no case of enlargement has been seen, although the yearly average of in-patients is 4,000 and out-patients 25,000. In the Canton Hospital, records for the years 1915, 1916 and 1919, there were only three entries of prostatic enlargement, although, during the same period, 156 cases of bladder stone were recorded. During the years 1910 to 1919 there were 13,761 operations performed in this hospital, of which only six were prostatectomies.

In Egypt, at the Kasr-el-Ainy Hospital, Cairo, 17 cases of prostatic enlargement were seen in a total of 8,472 male in-patients. Pfister, who for many years was a house physician in the Deaconess Hospital in Cairo, was impressed by the rarity of the condition in Egypt and believes that it is all the more remarkable, because infection of the bladder and prostate by bilharzia is rather common in that country.

In America, most urologists agree that the condition is rare amongst the negroes, while the incidence among the whites is similar to that in England. Of course the question arises as to the fairness of the comparison, for the average negro does not live so long as the average white nor does he seek medical aid for his complaints so readily.

As a result of this study, Walker believes that prostatic enlargement has an anthropologic distribution and, according to frequency, classes the races thus: Caucasian, Semitic, Arabic, Indian, Mongolian, Negro.

RELATION TO SEX LIFE

Now those countries in which prostatic enlargement is rare are the very places in which the sexual life is rather unrestricted. This, then, disproves the theories once held, that sexual excesses or attacks of gonorrhea predispose to prostatic enlargement, for those races which are comparatively free of the condition, are the very races not known for their continence.

What, then, is there about the sexual life of the Caucasian which predisposes him to prostatic hypertrophy? Is this type of tumor the price he pays for his so-called

higher morality? Why should the Roman Catholic clergy escape it? Why should married men be particularly subject to it? What is the relation between the sexual life and the prostatic overgrowth? These and other questions germane to the matter need to be answered, and it will be only by a proper piecing together of our many bits of fragmentary knowledge that we ever will, in all likelihood, be able to solve this perplexing riddle.

The prostate has been termed the "soul of the sexual power," and this indeed it is. If a normal sexual existence is maintained, the prostate evacuates its contents periodically and retains its normal size. When a man, however, during the fourth or fifth decade of life, suddenly begins to practice abstinence, there is an accumulation of secretion within the gland and naturally it enlarges. Bacteria grow readily in this prostatic fluid, which is excellent food for microorganisms. Prolonged congestion within the prostate stimulates the growth of the cells which constitute the prostatic tumor.

Contrary to the general opinion, it is not generally the *roué* who develops prostatic trouble. A goodly number of men begin to practice celibacy during the "old age of youth"; i.e., within the fourth decade of life. Some men feel that such an existence is the ideal life—that sex is something the sensible man should put out of his mind during his years of discretion. Others think that, by foregoing sexual activity, they will conserve their energy, that sickness will not befall them and that longevity will be thereby assured. A continent life may be forced upon a man because of illness of his spouse or himself. Business and financial worries often cause men to lose interest in things sexual. Though the underlying motive is not always ascertainable, there exists a philosophy that holiness may be had by abnegation of the sexual instinct.

Now, we have another bit of evidence relative to the incidence of prostatic hypertrophy among the celibate clergy. Prostatic enlargement is very rare among them, even though they lead an asexual existence. This is so because, never having developed a sexual life, the prostate is not developed, as it is in the mature, sexually active married man. Very little secretion is formed within the inactive prostate. The priest therefore seldom develops a prostatic tumor, because his prostate has never been activated and very likely maintains its adolescent size throughout life.

In the case of the married man who, for years, has been accustomed to periodic sexual indulgence, he cannot, with safety, suddenly abstain from a physiologic process which is essential for the maintainance of a healthy prostate. Prolonged stagnation, with irritating products within the prostate, is one of the major factors precipitating the generation of a prostatic growth. It has been repeatedly demonstrated that the tone of the body is best maintained by periodic exercise, and those whose sexual life is a transition from feast to famine are prone to suffer prostatic disability.

TREATMENT

Turning now from our speculations concerning the etiology of this form of tumor, we shall consider the measures adopted for treating it, when its presence becomes noxious to its possessor.

To comprehend the status that the surgical treatment of prostatic tumor enjoyed 75 years ago, we need but read the work of S. D. Gross, who, in 1855, wrote the following:

"In entering upon the treatment of this affection, we have to lament the impotency of our art and the limited nature of our therapeutic resources. . . . The malady progresses, in spite of the best directed efforts of the surgeon, and only ceases with life. For this result, so mortifying to his pride and so unfortunate for the patient, the practitioner is not responsible; it is inherent in the very nature of the disease, and does not, therefore, depend upon any want of skill in the selection and application of our remedial agents. . . . Excision of the prostate has been recommended, but it does not appear that anyone has really ever had the hardihood or folly to perform it, and this is, no doubt, the best thing that can be said in condemnation of it. The idea of extirpating the entire gland is too absurd to be seriously entertained."

In the period prior to Gross's time, however, several European surgeons reported that they had obtained beneficial effects by removing a piece of the prostate or by cutting into it. These procedures were hit upon quite accidentally. When stones were being removed from the bladder, it was observed that the prostate projected into the bladder and it was an easy task for the operator to snip off an obstructing nodule. In no instance was an attempt made to remove a tumorous prostate.

Perhaps the first direct attempt to incise the prostate without an open operation was made in 1815, at the Battle of Waterloo, when Guthrie, a surgeon serving with the British forces, was consulted by a man suffering with an obvious obstruction at the neck of his bladder. Guthrie devised an

instrument for cutting through the offending mass, but after a few unpleasant experiences gave up the practice. A few ingenious French physicians took up this idea and invented numerous mechanical devices for biting away a portion of the prostate, but their results were unsatisfactory and the method fell into disrepute. Nevertheless, the surgeons continued to study the surgical anatomy of the prostate and discovered that there were two ways in which to extract the gland.

Between 1880 and 1890 rapid strides were made and the surgeon's dream that a tumor of the prostate could be extirpated successfully was coming into fruition. Unfortunately, surgeons did not select their cases well and obviously poor risks were operated upon as readily as good risks. Though good results sometimes followed, fatalities were also numerous. The profession was straining every resource to make the removal of the gland a safe operation.

At the height of this hectic period, a rather sensational operative procedure was being promoted as a more simple and safer method of curing prostatic tumor. Scientifically it was known as orchidectomy; its popular connotation was castration. It was argued, though falsely, that since the sex glands played an important part in the development of the prostate gland, removal of the sex glands would cause the prostate to shrink in size. The foundation of this theory was the observation of scientists that eunuchs do not develop a large prostate, as does the average male. Their prostates remain boyish in size throughout life. Post-mortem examinations of elderly Skoptics (a fanatical religious sect still existent in Russia, also known as the White Doves), who practice emasculation on youths in order to secure purity, revealed immature prostates. Surgeons who practice in countries where, even today, eunuchism is not uncommon, report the absence of prostatic enlargement among aged eunuchs.

But all this supposedly substantiating data was erroneously employed; for though the facts showed that the prostate would not grow if the sex glands were removed during adolescence, it did not contain one iota of evidence to indicate that the removal of the sex glands late in life would cause a tumor of the prostate to vanish. The psychologic depression following the removal of the sex glands was frequently so profound that surgeons discontinued this dangerous, useless and unscientific act.

Another similar surgical procedure advocated as a sure cure for prostatism, was ligation of the spermatic cord. It rested on the idea that, if all the secretions from the sex glands were shut off, the prostate, being deprived of these vital fluids, would wither away. Fortunately, there was no mortality in connection with it—the one point in its favor. As usual, there was a great ballyhoo about this bit of surgery, which was hailed by the lay and medical press as the panacea for all prostatic troubles. But after the initial enthusiasm had worn down, and an accounting was taken of its results, it was generally conceded that vas ligation was a failure.

Electricity, in its varied modalities, has also been widely and extravagantly used in treating prostatic enlargement. Repeated experiments have demonstrated that there is no particular virtue in the electric current. The benefits derived from its application are due to its heat effects. When correctly employed by a physician, diathermy, in connection with other methods of recognized merit, will ameliorate an inflamed prostate. However, it has little action on an enlarged, hard, genuine tumor of the prostate. Electric apparatus has been misused by pseudo-physicians who have made unsubstantiated claims for it and, as a result of an enormous amount of false and misleading advertising, caused this form of treatment to acquire an unsavory reputation. Small, portable, electric devices have also been sold to the laity for home treatment, but the method of self-medication is a very dangerous one.

No prostatic patient should treat himself. A large number of men make an erroneous diagnosis on themselves as the result of reading ads which might appeal to the man past forty. Such catch phrases as "Are you an old man at 40"; "Do you want to change 60 into 20"; "Have you lost your pep"; etc., etc., act as a come-on for the manufacturer of prostatic apparatus. A cleverly written ad might make a man believe that he belongs to the group of prostatists. Besides, the brochures put out by mail-order concerns, often instill a fear of the physician, by inferring that physicians recognize only one form of treatment for prostatic enlargement, and that is surgery. That physicians operate on only a small percentage of their prostatic patients, is proof to the contrary.

In 1875, Bottini presented to the profession an instrument that would cut through

the prostate by an electric current. It was thought that this would obviate the distressing hemorrhage which followed the use of the older instruments which utilized the cold-steel cutting blade. Many patients, however, relapsed and a goodly proportion of these were worse after their "cure" than they were before it. Gradually this form of treatment lost caste and was generally discontinued by the profession.

At present the prostatic punch, an instrument for biting out portions of the prostate, is being used by an enthusiastic minority. Professional men differ widely in estimating the benefit derived from such treatment; the majority feel that instrumental therapy has a very limited use.

In the field of surgical removal many real advances have been made. Since 1900 there has been a steady decline in the operative mortality. We no longer fear the death toll from ether anesthesia, for now with local and spinal anesthesia we can perform an operation painlessly; and, by modern laboratory and clinical methods, we can rather accurately anticipate what organ will fail to function properly under the strain of an operation. Actually, the removal of the prostate is not difficult. Our main worry is to keep the heart, kidneys and lungs in proper working order.

PROGNOSIS

Every patient who is a candidate for surgery of the prostate, asks his surgeon as to the dangers of the operation. No physician is a prophet and of course cannot answer the question as dogmatically as the patient expects. No one can foresee every complication which might arise when the organs of the body are working under abnormally strained conditions. In a group of selected cases, operated upon by a specialist in this work, the mortality is exceedingly low, when one considers that the average age of the patient is about 64 years. General surgeons lose a much greater number, for they see only an occasional case. It is obvious that the man who operates on the appendix, gall-bladder, stomach, bones, etc., will not be as competent as the urologist who examines, treats and studies the prostate every day. A well-seasoned specialist will select his cases so as to avoid unnecessary risks and, if the patient is not in the proper condition, he will treat and build him up until he is.

Every indication points to a decrease in the number of prostatic growths within the

coming years. Medical societies, life insurance companies and public health agencies have joined forces and during the past ten years have heralded the cry, "See your doctor periodically for an examination, even though you are not ill." The consequence has been that a great many minor ailments have been detected and corrected before they could jeopardize the individual's health. Not so many years ago, a prostatic examination by a general practitioner was a rarity; while today, to omit it is considered a matter of neglect. In taking the history of prostatic patients, we often learn that they have not seen a physician in ten or twenty years, and pride themselves on this record. That is just where the trouble lies. If they had been examined when the first warning symptom appeared, the disorder might have been checked in its incipency.

Certain physicians fallaciously argue that the prostatic enlargement is a tumor; that tumors continue to grow; and for that reason every prostate should be removed as early as possible. I feel that this radical view is unreasonable, for we often find evidence that small growths have existed in the prostate of the man who has lived to four-score and ten, without causing any harm. Perhaps, when this man was sixty, he had some slight disturbance with his gland. What of it? A live man with a minor defect is better than a corpse with a perfect operation.

Time and again we meet with physicians and patients who have drawn erroneous conclusions from a few cases or from cases incorrectly diagnosed. An inflamed prostate may simulate a real enlargement and, when such a swollen prostate responds rapidly to treatment, the untrained and inexperienced physician hastily endorses his method and believes that all cases are just as easy to handle.

Too much surgery is being practiced, but the fault does not lie wholly at the door of the healer, for the great mass of people are impatient and desire a rapid amelioration of a bodily defect and thus, knowingly or unknowingly, promote operative measures on the slightest provocation. Surgeons are too often regarded as supermen who are supposed to be able to remake, in an hour or two, a defunct human structure. People are always ready to pay a substantial fee for such work, but begrudge a modest remuneration to the physician who tries to correct a defect in the body mechanism by non-operative measures.

The wise business man has come to realize that it pays to hire lawyers to keep him out of court and to make amicable settlements wherever possible, so as to prevent the loss of time and the expense incident to litigation. So too, in the field of Medicine, business men should learn the lesson that it pays to keep out of the operating room if possible, and they should engage a competent physician for that purpose.

Just because we can safely remove prostates, it does not follow that all disordered prostates should be removed. Some years ago we learned that lesson when it was found that the appendix could be easily excised. Everyone who had a pain in his belly or thought that he had swallowed a grape seed, had his appendix removed. Folks even went to the hospital voluntarily, for an appendectomy, so that the appendix might never bother them. The operation became popular. If one kept one's appendix something was wrong. But now the public and the profession have seen the light and today this vestigial organ is removed only when the proper indications are present. Prostatic operations are in the same category, and slowly but surely we are learning conservatism in all things—even in surgery.

185 N. Wabash Ave.

Conservative and Radical

The real menace to the medical profession today is not the radical. It is the smug, self-satisfied person who is quite content with things as they are and who wants no change of any kind which will compel him to adjust himself to meet the modern situation.

We are in danger today, not because of the aggressiveness of radicals, but because of the indifference, inertia and inane passivity of the ultraconservatives.—DR. G. M. RUSSELL.

Tonsillectomy Under Local Anesthesia

By J. B. H. Waring, M.D., Cincinnati, O.

TONSILLECTOMY is the most commonly performed surgical operation today; and it is safe to say that the great majority of tonsillectomies, even in the adult, are done under general anesthesia. Granted that tonsillectomy under local anesthesia is impracticable as a rule in children, what right have we to subject our adult tonsillectomy patients to the added dangers inherent in any general anesthesia? None, we may say, except in the occasional neurotic type of patient, difficult of control under local anesthesia, or where the patient insists upon general anesthesia.

Local anesthesia is of comparatively recent development, in this country at any rate, and surgeons all over the country are still doing surgical operations under general anesthesia, which could be performed just as effectively, and far more safely, under local anesthesia. After surgeons of a certain type have been performing all of their surgery under general anesthesia for a decade or more, they slide into a rut of routine and, unconsciously perhaps, stubbornly resist any suggestion of a change to newer and perhaps better methods. This is largely the situation with respect to tonsil surgery; except that it undoubtedly requires more confidence and skill on part of the operator to keep a nervous and frightened patient under control for a local anesthesia tonsillectomy.

The Sluder technic, wonderful advance in tonsil surgery that it was, is very rarely employed in local anesthesia tonsil work; partly because of its inherent difficulty of performance, and partly because so many adult tonsils are practically impossible for the average Sluder operator to remove under a local anesthetic.

A great many so-called "dissection" tonsillectomies are performed under local anesthesia; but, again, a great many dissection operators insist upon general anesthesia, because comparatively few patients can endure the nerve strain of sitting up in an operating chair for from 15 minutes to an hour, while the operator "dissects" the pair of tonsils, and then almost routinely has to go through hemostatic efforts in addition.

One reason why tonsillar electrocoagula-

tion is enjoying its present vogue is largely because, in adults, it is peculiarly adapted to a local anesthesia operation, in the office or clinic. Another reason is that it is "safe." There is no danger of hemorrhage or other complications, so dreaded by the patient and family, as possible attendants upon any surgical tonsillectomy. Yet, for tonsillar electrocoagulation, the operator must be a finished throat surgeon to start with and, in addition must be an expert in electro-surgery.

My own adult tonsillectomy patients are given their choice of suction tonsillectomy (surgical) or tonsillar electrocoagulation: Both are routinely performed under local anesthesia; both are practically bloodless; and both are practically devoid of complications. I tell them it is somewhat a question of one big sore throat for a few days or a number of little sore throats at intervals of a week, for a period of six to eight weeks — say five weeks, on an average. Young adults almost invariably select the one big sore throat; while an increasing number of those from forty years upwards prefer coagulation of the tonsils.

Because the suction technic is so peculiarly adapted to local anesthesia operation, however, it may be of interest to sketch this technic in some detail.

Where practicable, adult patients are given a course of alkalinization treatment a week in advance of operation. Such patients certainly get along better and have far less postoperative sore throat complaint.

TECHNIC OF ELECTROCOAGULATION

From 30 minutes to an hour prior to operation, the patient is given, on an average, three grains of phenobarbital. This is a powerful sedative, but given in this way does not put the patient in twilight sleep, as is so often seen with "dissection" operations. Patients are fully awake and co-operative, but without nervous apprehension; furthermore the barbituric acid element counteracts any possible toxic reaction from the local anesthetic employed.

The throat is next sprayed several times with a 2-percent Nupercaine-epinephrin solution. Meanwhile the patient is shown the equipment employed and its action

throughout. Knowing in advance exactly what to expect, the patient is not frightened or wondering what is going to happen next. This I regard as of the utmost importance. Time and time again I have had doctors bring in nervous and frightened patients with the admonition, "Don't tell them a thing about it; just sit them down and get those tonsils out as fast as you can." I have done just the opposite and, as a rule, these "up in the air" patients settle down and make ideal local anesthesia patients.

Nupercaine is equally satisfactory for anesthetization of mucous membranes and for infiltration anesthesia. Two percent is adequate for use as a spray, and 1:1,000 for infiltration, plus 2 to 5 drops of 1:1,000 epinephrin to 100 cc. of solution. Aside from its virtual non-toxicity, when used in proper concentration, Nupercaine has the added advantage of producing a prolonged anesthesia, lasting from six to eight hours.

A 1-percent solution of procaine, with antipyrin and 1-percent of 1:1,000 epinephrin, has also been employed over a period of years, with the utmost satisfaction, for infiltration anesthesia.

SUCTION TONSILLECTOMY

In suction tonsillectomy, suction developed from an electrically-driven compressed air pump and applied through a tonsil suction tube of special design, is employed to stretch adhesions and lift the tonsil from its fossa into the bowl of the tonsil tube. This done, a previously adjusted tonsil snare loop is carried down the shaft of the tonsil tube, slipped over its bulbous head, and drawn taut by direct pull on the snare. This causes the snare loop to slip off the bulbous, inclined-plane mouth of the tonsil tube automatically; next the ratchet of the snare is brought into play and, as the snare loop is tightened down by the ratchet ring of the snare, the tonsil is enucleated—virtually "shelled-out" in a clean, rapid, practically bloodless, in-capsule manner (see Fig. 1). The simplicity and remarkable rapidity of this technic must be seen to be fully appreciated, especially with reference to its peculiar adaptability to local-anesthesia tonsillectomy. As with any other surgical operation, perfect equipment and technic are essential.

The patient is shown in advance just how the tonsil is removed; assured that there will be no pain and that only a few

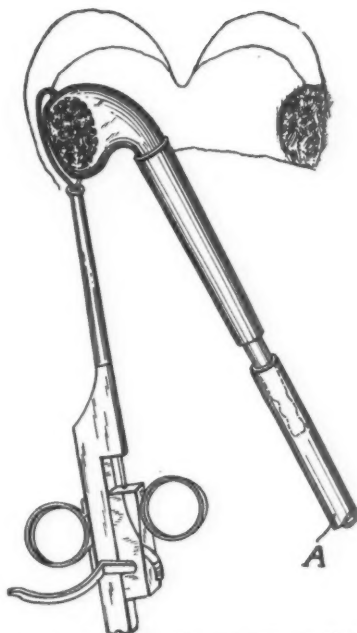


Fig. 1.—Tonsil Suction Tube and Snare in Position.

seconds will be required for the removal of each tonsil; and that the operation will be practically bloodless. Fear of pain and hemorrhage seems to be the chief worry of the average tonsil patient.

Each patient is told that, when the tonsil is enucleated, there may be a little blood-tinged saliva, or perhaps even a few drops of free blood, but nothing to worry about, and is instructed simply to lean forward in the chair, with the mouth slightly open; to breathe quietly; not to clear the throat or cough, but to allow any excess saliva to drool into the pus basin by gravity. Usually only a little blood-tinged saliva drools with one or both tonsils; often both enucleations are perfectly dry; or inside of a minute the fossae are dry. Occasionally a slight oozing point may be located in a fossa; and very, very rarely a small spurter may be noted. Having assured the patient in advance, not the slightest alarm is occasioned if blood-tinged saliva drools, or even a few drops of free blood. With the suction technic, at least in my experience, there is none of the free bleeding encountered at times when larger vessels back of the tonsil are cut, in the course of "dissection" removal. If desired, a cotton tampon may be placed in each fossa immediately upon removal of the tonsil and, with firm



Fig. 2.—Tonsilloscopic Tongue Depressor.

pressure for a minute or two, the enucleation is bloodless.

After the tonsil is carefully examined to see that its capsule is intact, the fossa is carefully examined from top to bottom, with a tonsilloscopic tongue depressor, for perfection of enucleation and to see that the fossa is dry throughout. This tonsilloscopic tongue depressor (Fig. 2) is a combined tongue depressor and pillar retractor, which affords perfect one-handed exposure of the tonsil fossa, with the operator's other hand free for handling the sponge forceps or other instruments desired. If an oozing point is seen under this direct-vision examination, it is carefully located with a small cotton swab, uncovered, and the point quickly picked up and compressed with a Herbert tonsil hemostat. With the suction technic it is fairly uncommon to locate an oozing point in a fossa a minute after the tonsil is removed; still rarer to locate more than one oozing point; and usually point compression with the tonsil hemostat is all that is necessary to insure a perfectly dry fossa in every case. With any type of tonsil operation, it is of the utmost importance to see that both fossae are perfectly dry before the patient leaves the operating room.

With the first tonsil perfectly removed and the fossa dry, the second tonsil is removed in the same way and assurance made

that the enucleation is perfect and the fossa dry. Then the patient is put to bed, in a lateral-prone position, and instructed to breathe quietly, with the mouth slightly open and downwards. In this way mucus and saliva drool out of the mouth by gravity and the patient is not annoyed and the pharynx kept active by constant efforts to clear the throat. Another advantage of this position is that any postoperative oozing or tendency to bleed shows up quickly on the white towel under the patient's mouth. Patients placed in bed in a semi-sitting position have been known to bleed considerably, the blood being swallowed as it oozed, and the first intimation of hemorrhage being a copious vomiting of blood, perhaps several hours after operation.

Usually enucleation of each tonsil is effected in from ten to fifteen seconds, with about a minute's breathing spell for the patient between, and this without the slightest effort at speed. The operation is so inherently rapid there is no need for speed effort, and the operator, in consequence, can concentrate on a smooth, perfect enucleation. The operation is painless, under proper local anesthesia preparation of the throat; surgical shock is virtually non-existent in the average case; and the patient is not frightened or weakened by blood loss and subsequent hemostatic efforts.

By the time the patient is returned to bed the hypnotic effects of the first phenobarbital first given are noticeable and, if left undisturbed, the average patient sleeps quietly for an hour or two. For postoperative pain, a milk sugar powder, containing $1/32$ grain (2 mgm.) of morphine sulphate, is dusted on the tongue every 2 to 3 hours, as needed; otherwise the throat is left entirely alone. Experience demonstrates that these patients do better if we omit the sprays and swabs so often employed as a routine after tonsillectomy.

The local-anesthesia tonsillectomy here described certainly eliminates the danger of general anesthesia and, in general, is very satisfactory to both patient and operator. Convalescence, as a rule, is entirely uneventful, and is shortened by half, on an average.

7 E. McMillan St.

PHYSICAL · THERAPY AND RADIOLOGY

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PHYSICAL THERAPY FOR ACUTE ANTERIOR POLIOMYELITIS

THE newspapers are again playing up the dramatic and tragic features of acute cases of anterior poliomyelitis, especially the spectacular treatment of respiratory paralyses with pulmotors and respiratory chambers. They warn us of the advent of a nation-wide epidemic and they print, indiscriminately, good advice from authorized health officials and misleading information and comment.

We are not averse to newspaper publicity, if it leads to greater knowledge in prevention measures, earlier recognition and earlier treatment, but after public attention has been attracted and professional anxiety stimulated, what has the pediatrician to offer to the early recognized case?

Our authorities advise rest in bed, diet, a serum—not always procurable and not inevitably curative—and a stupid dictum, copied unquestionably by each author from another, against the use of electricity during the acute stages of the disease. "Wait," says each writer, "until the inflammation subsides and then use mechanical means to overcome muscular distortion and restore muscular power and coordination. Failing in this, if the patient lives, the orthopedist

must be called in."

This is advice to do nothing while the fire is burning, in the hope of salvaging something from the ruins. It is based upon ancient experience with low-voltage, direct currents from old-fashioned voltaic batteries and weak electromechanical currents from primitive induction coils. We agree with the dictum based upon such premises.

Such antique methods were useless and are useless in the acute stage. But physical therapy has made great progress. The treatment of non-suppurating inflammatory processes by modern physical therapeutic methods rests upon sound principles and well attested experience. It is applicable to all organs of the body. We refer specifically to the antiphlogistic action of converse heat by phototherapy or electrothermy,* which are available to any physician using electrical lighting currents, and the decongesting action of the penetrating, rhythmic, high-voltage condenser charge (popularly called the wave current of Morton), from a Holtz or Wimshurst electrical generator—an apparatus which should be found in every modern hospital.

* See CLINICAL MEDICINE AND SURGERY, Vol. 38, No. 7, July, 1931, pp. 490-493.

Conversive heat and decongestion maintain the nutrition of the anterior horn nuclei and the affected spinal tract cells by restoring the blood supply and relieving the pressure of the incident edema. It is obvious that these treatments must be applied as early as possible, to save the nerve cells from extinction, since once dead they can never be revived and the muscles they innervate can never regain function. Even late treatment may salvage some embarrassed cells and thus restore motor function.

Where paralyses are evident, convulsive heat and passive exercise maintain nourishment and muscular tone, preventing atrophy and distortion.

Unless these measures have been given an honest and intelligent trial, it is manifestly incorrect to state, in the presence of melancholy crippling or of death, that "everything" has been tried which medical science can offer."

F. T. W.

Physcial Therapy in Heart Disease

By Edward Podolsky, M.D., Brooklyn, N. Y.

IT HAS long been known that, in heart disease, distinct benefit may be realized from the various forms of physical therapy, if judiciously applied. Even so simple a procedure as massage may be employed in a manner grateful and helpful to the patient; this is most effectively carried out in the form of *effleurage*, or of friction with some aromatic substance. Strange as it may perhaps seem, even in the precordial pains of anginal character, vibratory massage is occasionally effectual.

Medical gymnastics, both passive and active, may be employed in several ways, either manually or with the aid of special machines. Passive movements can be used, even in cases of heart failure; but for active movements there must be a certain exercise-tolerance, and trunk movements should be given only if compensation is fairly adequate.

As a general rule, heliotherapy is contraindicated, but artificial sun baths are often of use, as they act as a stimulus to metabolism, and this is especially useful in cases of chronic myocarditis. Air baths are well tolerated, provided the air is warm and not stagnant.

HYDROTHERAPY

Balneotherapy is one of the most important of the physical agencies in the treatment of heart disease. Different varieties of baths are employed. Stimulating agents in the carbon dioxide baths are classed under the headings: (1) Chemical; (2) thermal; (3) mechanical; (4) electric. Under

the mechanical factors are included the hydrostatic factor and direct effect of the carbon dioxide on the skin.

Briefly, the specific stimulating effect of CO₂ on the cardiovascular system acts in three ways:

1.—The gas contained in the water produces a chemical stimulus, which acts on the nerve endings in the skin:

A. on the temperature sense, as a heat stimulus;

B. on the pain sense, as a chemical stimulus;

C. on the tactile sense, as a simple contact stimulus (by the bubbles of gas).

Bad-Nauheim is described as the classic representative of spas for cardiac treatment. The springs are rich in iron, carbon dioxide and sodium chloride. One of the most important effects of CO₂ baths is the greatly increased diuresis. This is often striking, even in cases where retention had not been a marked clinical sign.

Where it is impossible for the patient to go to the spas, artificial carbon dioxide baths may be used, but in giving them the following precautions must be taken:

The patient should not become dyspneic, nor should he suffer from cold or from undue heat. The pulse should become quiet and fuller. It is best to begin with half-baths and to increase gradually. Excited patients and those with high blood pressure and anginal conditions, should never have full baths. The surface of the water should not extend over the mammae; it is also important to prevent the inspiration of CO₂.

Temperatures must be prescribed individually, and very slowly reduced. Generally speaking, the limit of temperature for an asthenic patient is 37°C.; for a patient with Graves' disease, 28°C.; for aortic incompetence, about 33°C.; for angina pectoris, about 35°C.

It is best to begin with short baths of from 6 to 8 minutes; the limit should be 12 minutes. Baths should be taken an hour after a light breakfast of coffee and rolls, and two hours' rest in bed after the bath is absolutely essential.

Another use of hydrotherapy is in the form of ice bags or cold water pipes, to calm and soothe a too-forcible heart action, as in acute endocarditis and pericarditis, as warm compresses over the precordium, or as hot foot and hand baths, which have a pain-soothing action.

X-RAYS

Very little has been done with x-rays in heart conditions. Radiation of the aorta is claimed, by some authorities, to relieve angina. In certain cases of rheumatic carditis, roentgen irradiation of the heart appears to exert a favorable influence. The machine setting was calculated to yield about 10 percent of the erythema dose, distributed throughout the heart muscle. Following irradiation, changes in the electrocardiogram were noted. It was believed that these changes were due to the effect of irradiation of the myocardium, with modification of the rheumatic lesion. The paroxysms of severe heart pain were found to be relieved by roentgenotherapy.

Early cases, in the first attack of rheumatic fever, usually offer the best chance for success from this mode of treatment. It has been suggested that, in rheumatic fever, roentgen irradiations of the heart may serve to desensitize the tissues of that organ to an allergizing substance, thereby favoring the subsidence of the existing lesions and preventing further cardiac damage. In patients having their first attack of rheumatism, irradiation may prove useful in minimizing the danger of damage to the heart.

DIATHERMY

Diathermy is useful in certain forms of heart disease. In cases where it has been tried, the edema, rales at the bases of the lungs, coldness of the extremities, stenocardia and orthopnea have either been entirely abolished or distinctly improved. The cases in which one may hope to accom-

plish the greatest good are those in the young or middle aged, with slight enlargement and decompensation, in which the physician fails to obtain good results with the usual medical treatment within a few weeks. Teleoroentgenograms, taken before and after treatment, show a decrease in the size of the heart. Cases of acute endocarditis or myocarditis had best be treated with medical remedies, rather than physical.

In cases of cardiac irregularities, it is often possible to overcome the dilatation, but the return to normal rhythm after diathermic treatment, except perhaps in fibrillation, is not to be expected. In laboratory animals, both fibrillation and flutter have been caused and controlled by diathermy. The least hopeful cases for diathermic treatment, or for any treatment for that matter, seem to be those of cardiovascular disease in which the renal symptoms predominate.

Much can be done in alleviating the painful paroxysms of **angina pectoris** by the application of diathermy with the d'Arsonval current as follows: First, see that the patient is in a prone position and fully relaxed. The current applied should not exceed 1000 milliamperes; it is best to use a current of from 300 to 800 milliamperes. Two metal plates of flexible, 26-gauge block tin should be cut and shaped. The smaller one should be 4 by 6 inches, placed in front, over the precordium; the larger one, 5 by 8 inches, on the back and exactly opposite the anterior electrode. The duration of treatment is from ten to fifteen minutes, never longer. The patient should be allowed to rest for one-half to one hour after the treatment. In a few minutes after the beginning of the treatment, all feeling of anguish ceases. Nagelschmidt says that, if this prompt therapeutic effect is not obtained, we may always expect an aneurism or grave myocarditis.

In **myocarditis**, the treatment is carried out as follows: Local diathermy through the heart is used on alternate days. Cases of weak heart muscle, skipping pulse and exhaustion after slight exertion are, after a few weeks of diathermy treatments, made strong, with normal muscle tone to the heart, and have a full, even pulse. The electrodes should be placed as in angina pectoris and a current of 300 to 800 milliamperes passed, over a period of twenty minutes. The benefits of diathermy treatment in myocarditis may last for a few months or even years. In some cases only a few

treatments may be needed; in others, treatments have to be prolonged for months.

In diathermic treatment, the cardiac muscle is strengthened, through the active hyperemia, which also extends into the deep tissues. Furthermore, a quieting, analgesic and resorption-prompting effect can be recognized, as well as a decrease of hypertension.

The chief indication for the treatment of heart conditions with diathermy is in subacute and chronic conditions of weakness of the heart muscle, associated with cardiac pains and dilatation, regardless of whether they developed in an "idiopathic" manner, or secondarily, after over-exertion, myocarditis, valvular defects, myxodegeneration or arteriosclerosis.

Conditions of collapse during treatment of heart patients have repeatedly been recorded in the literature. Such accidents can be avoided if one produces a more peripheral hyperemia with condenser bed treatment alone, prior to the direct, transverse warming through of the thorax. The patient should be given the treatment while in a rested condition and should rest for about an hour afterward.

According to the severity of the case, when the treatment is given daily, it will extend over 2 to 5 weeks, the nature of the results at the beginning indicating the necessary duration of the treatment. It may be possible that a repetition of the treatment may become necessary, after six months or a year.

VENOSTASIS

Another means of securing relief in heart disease by a physical agent is the process known as venostasis. This consists of shunting the blood into the venous and capillary reservoirs of the four extremities, and offers a satisfactory and convenient method of treating cardiac asthma and angina pectoris.

The instrument employed for this purpose is called a venostat, and consists of four blood pressure cuffs, arranged in series with a Tycos diaphragm manometer and an inflating bulb. By this means a substantial part of the blood volume may be temporarily thrown out of active circulation. This may be applied to the treatment of heart failure, as indicated by the recent studies of Eppinger, Papp and Schwartz, who found, in cardiac asthma, an overflow of blood from the periphery to the heart and lungs. They believe that the embar-

assment of the cardio-pulmonary circulation, on the one hand, and the enormous velocity of the blood, flowing through the capillaries, on the other, are responsible for the dyspnea.

The technic of venostasis is as follows: Cuffs are applied to the four extremities, as in taking the blood pressure, placed as high as possible. They are then inflated up to a point corresponding to the diastolic pressure. The veins are thus compressed and the arteries are still patent, so that the blood flows into and "pools" in the extremities. In a very few minutes the arms and legs swell and become blue and the veins stand out. The patient will complain of numbness and tingling in the extremities. This may be lessened by gentle stroking of the skin towards the heart.

The pressure in the cuffs is maintained for a variable period, generally ten to twelve minutes, and is then very gradually reduced, the blood which was locked up in the veno-capillary reservoirs of the skin and muscles returning into active circulation.

A case of cardiac asthma may by this procedure be relieved in a few minutes, and venostasis may be repeated as often as the asthma occurs. In some cases it has been applied three or four times a day for a number of weeks. In others, one application a day is sufficient. As few as one or two treatments may be followed by weeks or months of comfort.

In cases of continuous dyspnea or orthopnea, due to heart failure, a ten-minute application of the venostat often gives the patient a night entirely free of distress. In cases of cardiac pain, such as in angina pectoris, venostasis reduces the flow of blood to the heart, which therefore expels less blood, hence the distension of the aorta is reduced and the pain cycle is broken.

Less work has been done on the benefits that may be derived from physical therapy in heart disease than one could desire. Medical treatment has taken up much attention; yet the rational cardiologist, as well as the general practitioner, must be acquainted with all the possible therapeutic procedures in treating heart disease, of which physical therapy is no small item. There is no doubt that distinct benefit will be derived, in a great number of patients with heart disease, when physical measures are properly and judiciously used, either alone or in conjunction with other forms of treatment.

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X-Rays in Asthma

By F. W. Schroeder, M.D., Strasburg, Ill.

HAVING become thoroughly disgusted with asthmatic patients, most of whom cannot be induced to spend sufficient time with one physician for the necessary procedures calculated to effect an eventual cure, I cast about for some means that would give the sufferer more than passing relief while a lasting cure could be carried out by orthodox measures.

A study of the biologic effects of x-rays on the glandular structures of the human body caused me to search the literature for a probable precedent. I found that my idea was not original, but had been anticipated. However, little information was given by those who had done experimental work with x-rays in asthma. One writer suggested irradiating the spleen, another the liver, while others mentioned the thymus gland, the lungs and other structures.

From the diversity of opinion, I concluded that it probably made little difference through what part of the chest or abdomen the rays were directed and concluded to use no cone whatever and center the rays over the splenic area, allowing the divergent rays to strike what other parts of the body came in their way. The head, and also the body from the pubic bones downward, were protected with 18-gauge sheet iron. The other factors were as follows: Distance, 25 inches; time, 5 minutes; filter, 3 mm. of aluminum; 7 inch gap; 5 milliamperes; patient flat on back.

Four such treatments were to constitute the course of treatment, one treatment to be given every seven days.

The first patient to receive this treatment was a woman of fifty-four years, who weighed 230 pounds and had a systolic blood pressure of 212. While this woman was not my patient, I was called to her home six times in five days to relieve her from severe attacks of asthma. Finally, since it was impossible for her to go to see her city physician and too expensive to have him come to see her, she appealed to me for something more lasting than adrenalin. Consequently I invited her to my office and gave her one x-ray treatment, according to the technic described above. She remained free of asthma for seven days, but instead of returning in a week, she felt

able to drive to the city, 50 miles distant, to consult a surgeon for the asthma. Though the surgeon sent her back to me without offering any treatment, it was unfortunate for my experiment, because she had several light attacks following this trip to the city but did not think it necessary to come for further treatment. Nevertheless, the first treatment was followed by seven days of complete freedom from asthmatic attacks.

The next case was a boy of seventeen who was in a constant asthmatic state, which varied in severity. Only one-half of the time was he able to attend school, and then not with any pleasure or satisfaction.

This boy received the four exposures and remained free from attacks for seven months, although he broke every law and canon by which an asthmatic should govern himself.

The third case was a man of 60, whose asthmatic attacks were brought on by practically unchangeable living conditions. He was much improved after the first treatment and refused the fourth because he felt entirely well. He remained free from attacks for at least three months and, since circumstances later permitted improved living conditions, he remained permanently free.

Case four received but one treatment and remained free for the ten days she lived in the neighborhood. I have no further record of this woman of forty-three years.

Case five always developed asthma when autumn began and suffered more or less until spring. She was given the four treatments and remained free to midwinter. Then the ailment became slowly evident and another four treatments were given, which carried her past the winter months. No effort was made to determine the cause of the recurrence each winter, although, had circumstances permitted it, no great difficulty should have been encountered in finding it.

The sixth case came from a distance and the first treatment gave notable relief. The second treatment was given two weeks after the first. This patient had not intended to come back after the first treatment, because he felt so much better and did not

think he needed four. My personal opinion is that he wanted to save the money. The second treatment did not give the measure of relief that followed the first. Road conditions prevented him from returning and his asthma gave trouble until warm weather. Since he moved away that summer, a further trial of x-rays in his case was prevented. This case also illustrates

the apparent necessity to repeat the treatments at weekly intervals.

I am not regarding x-rays as a specific for asthma nor the best treatment in many cases, but when one is dealing with patients who cannot or will not submit to such measures as are plainly indicated in their particular cases, x-rays seem to make a fairly efficient substitute for orthodox measures.

CLINICAL MISCELLANY

The Interpretation of Dental X-Ray Films

THE present tendency of the dental profession, to employ an x-ray examination as an accessory method of diagnosis and as a check on completed technical procedures, is commendable. From the standpoint of service, it would probably be desirable to have x-ray equipment in every dental office, but in many cases this is neither possible nor advisable, for economic reasons. The x-ray laboratory or the dentist specializing in the field will continue to furnish this service to the larger number of practitioners.

There should be an important distinction between the dentist who is furnishing a consulting service, aided by roentgenograms, and the laboratory operating a technical service for the production of films. Frequently a consulting service is desirable and when indicated the roentgenologist should tender the diagnosis, as a result of the combined findings of clinical examination and radiographic interpretation, and should receive a suitable fee for the consultation.

Where a simple technical service is desired, the present custom adopted by nearly all laboratories, of sending a chart or written diagnosis with the films, is to be deprecated. This is especially true where such a diagnosis is made by a technician or by a dentist who has not seen the patient or is not especially competent in diagnosis. It may have been necessary, in the early days of the x-rays in the dental field, to assist the dentist in his interpretations. In the present day it is a discourtesy to the dentist and a frequent cause of embarrassment to receive such a report, and to have the diagnosis, often erroneous, fall into the hands of the patient.

If the dentist is not competent to inter-

pret the films properly, he should either learn to do so or retire from the practice of dentistry. A discussion or consultation in the doubtful cases is desirable, but the gratuitous charting of pathologic and diseased areas is an offense to the dental profession.

To the dentist who feels uncertain of his ability to interpret films, a self-conducted course, consisting of a careful study of available radiographs in his files, would be valuable. Assistance from a colleague, to test his accuracy of observation and his soundness of judgment, would add to the value of such a study. This is a matter of vital importance in the daily life of every practicing dentist and may well be given serious thought and attention.—Editorial in *Bul. Chicago. Dent. Soc.*, March 12, 1931.

Too Much Sunlight

SUNLIGHT is a powerful medicine. All such medicines are powerful for good if used when they are needed and if they are properly used. They are powerful for harm if used improperly.

Light is essential to maturing. It causes seed to sprout and, after that, it causes growth of the plant, formation of its parts, flowering and the formation of seed. In other words, it contributes to genesis, maturing and senescence. If the same principle be applied to the human plant, it is fair to conclude that whatever promotes the growth of the child, the development of the adolescent, the maturing of the adult, also contributes to senescence and ultimate senility.

If this reasoning be correct, exposure to sunlight is good to promote the health of young people, but older ones who would ward off senility and the group of diseases that go with it should avoid excessive

exposure to light. Just as an illustration: There is more cataract in India and Egypt than in all the world outside the regions of tropical glare.—W. A. EVANS, M.D., in *Chicago Tribune*.

Pyretotherapy

PYRETOTHERAPY has an important place in medical therapeutics and it will receive its due credit only when a practical method of producing a fever has been perfected and when sufficient work has been done to ascertain the most desirable elevations of temperature to be used in treating the various afebrile diseases in which it is applicable. But it, in itself, will probably never be a sure cure of all the diseases it is now used for. It should be used in conjunction with other useful therapeutic measures when possible. Therefore frequent consultations with specialists who usually treat such patients should be had.—DR. J. CASH KING, of Memphis, Tenn., in *Phys. Therap.*, April, 1931.

Effect of Physical Procedures on Blood Flow

THE effect of certain physical procedures on the blood flow in a normal limb shows that:

1.—Heat produces an increased blood supply, due to active dilatation of the blood vessels.

2.—Massage and passive motion, by mechanically emptying the blood vessels, cause a temporary increase in the rate of flow.

3.—Electricity is ineffective in increasing the blood flow. Its value in the treatment of poliomyelitis and peripheral nerve injuries may be due to some other effects.—DR. H. WOLFSON, in *J.A.M.A.*, June, 13, 1931.

X-Ray Examination of the Appendix

MUCH information can be gained concerning the appendix through x-ray study, especially if one employs both the opaque meal and the enema. If the appendix fills—and all normal and many pathologic appendices should fill after the opaque meal—we are able to study the question of size, position, length, mobility, concretions and coincidence with a point

of possible pain on pressure.—DR. JAS. T. CASE, of Chicago, in *Illinois M. J.*, Mar., 1931.



Fig. 1.—Active Movement in Fractures.

Physical Therapy in Fractures

THE scientific exhibit dealing with the treatment of fractures, at the recent meeting of the A.M.A. in Philadelphia, was most instructive, and several of the booths dealt with the application of physical measures in the care of these surgical lesions.



Fig. 2.—Massage in Fractures.

These booths were so valuable and practical a part of the show that I am reproducing here sketches of two of them. The legends on the walls are so thoroughly self-explanatory that comment upon them seems to be superfluous.

GEORGE B. LAKE, M.D.

Chicago, Ill.

RECENT ABSTRACTS

Correction of Faulty Posture by Short Static Contractions

In *Arch. Physical Ther. X-Ray, Radium*, Feb., 1931, Dr. Jas. H. McCurdy, of Springfield, Mass., calls attention to the prevalence of poor posture — especially postures in the antero-posterior plane, which occupations in school, office and shop all tend to increase.

Swedish gymnastics have been the common means employed for correcting such faulty postures and it has succeeded in teaching good posture to school children; they pass good posture tests, but they fail to maintain good habitual posture. The success of this method depends upon increased joint resistance. Strong joint resistance brings discomfort or pain and, under such conditions, motivation by the teacher is difficult.

Dr. McCurdy recommends a new method of dealing with faulty postures which he calls the short static contraction method.

The short static contraction method is defined as the holding, with increases of body weight, of muscles in the short contracted position. Illustrations of the method are placing increased work upon the posterior neck muscles in the contracted position, increased dosage on the shoulder retractors with the elbows at shoulder level and the arms crowded backwards, or placing increased resistance on the thigh flexors in the flexed position.

The author gives the details of the various exercises by which his method is brought into operation. These methods cannot be abstracted but should be studied by those who are interested in evaluating this new method, which the author considers not only corrects a faulty posture, but maintains a good one.

X-Ray Treatment of Exophthalmic Goiter

Commenting upon an article in *Strahlentherapie*, March 22, 1930, the editor of *Physical Therap.*, in the June, 1930, issue, says that the expression of doubt on the part of the author, as to the manner in which the roentgen rays influence exophthalmic goiter, indicates an unfortunate condition of unfamiliarity with the action of this agent.

The x-rays are inhibitory to the action of the functions of every cell, arresting its active processes. So in Basedow's disease the x-rays gradually bring about, in a more skillful and scientific way, what the surgeon accomplishes by a guess. The surgeon cuts off a portion of the gland. He never knows how much to remove, and the best of them sometimes make a bungle of it. The x-rays, on the contrary, gradually bring about an inhibitory effect on the gland, lowering its secretion, with a gradual return of the pulse to its normal rate and disappearance of the Basedow syndrome. Many skillful radiologists have fully established this fact, and why the surgeons still dominate the field can be explained only by their overpowering prestige.

The author of this paper is evidently a surgeon. He did not care to know how the x-rays affect the thyroid gland, but rather wished to discredit its use in favor of surgery.—From *Med. Herald, Phys. Therap. & Endocrine Survey*, Jan., 1931.

X-Ray Treatment of Essential Hematuria

As reported in *Radiology*, June, 1931, Dr. L. J. Carter, of Brandon, Canada, arrested the hemorrhage in a very severe case of "essential" hematuria by x-ray treatments, continued from 1927 to 1929 whenever recurrences took place. There has been no recurrence since 1929. This method of treatment has been successful also in some other cases, following one or more irradiations. The principle on which this therapy is applied is the same as in x-ray treatment of uterine hemorrhage.

The technic followed was: Focal skin distance, 10 inches; spark gap, 9 inches; 120 K.V.; time, 10 minutes; milliamperage, 5; filter, 6 mm. aluminum and sole leather.

Encephalography and Ventriculography

In *J.A.M.A.*, Feb. 7, 1931, Dr. E. P. Pendergrass, of Philadelphia, reports upon 221 cases of patients suffering from brain tumors who had been referred to his clinic for roentgen examination of the head. The tumors of these patients were distributed as follows: 97 in the cerebrum, 65 in and around the pituitary fossa and 59 in the cerebellum.

In the 97 cases of cerebral tumors, 46 cases (47.4 percent) were diagnosed clinically, and of these 33 were accurately localized.

There was roentgen evidence of increased intracranial pressure in 55 cases (56.7 percent), and in 26 cases the tumor was localized.

In the 65 pituitary lesions, it was possible to make a correct clinical diagnosis in 55 (84.6 percent). The roentgen diagnosis was accurate in 58 cases (90 percent).

In the 59 cerebellar tumors, 48 (81.4 percent) were correctly localized by clinical examination. The roentgen examination was of localizing value in 30 cases (50.8 percent).

It is appreciated therefore that, even in brain tumors, there is an urgent need for more accurate methods of localizing the lesion, since the mortality from unlocalized brain tumors is 100 percent. The author considers that encephalography and ventriculography are valuable procedures in the diagnosis of brain tumors.

Education in Physical Therapy

In *J.A.M.A.*, Apr. 25, 1931, the Council on Physical Therapy of the A.M.A. suggests that it is possible for practical information and even demonstrations, in connection with the field of physical therapy, to be extended to the pro-

fession through the various county, state and other medical societies throughout the country.

The Council directs attention to the importance of meetings of this kind and is in a position to suggest the names of qualified lecturers for any location. Appreciation would be sharply awakened, the Council believes, among those attending meetings, to the fact that the field of physical therapy is one of the most important in the domain of therapeutics, and that extension of aid of this nature to the many persons needing it would be definitely hastened.

Slipshod X-ray Dosage

It is, in principle, dangerous to base one's x-ray therapeutic technic upon such physical factors as spark gap and milliamperes minutes.

An installation for x-ray treatment should be standardized as follows:

If one intends to do skin therapy, intermediate and deep therapy, he should first chart his machine in accordance with his apparatus. For skin therapy, he will probably use a broad-focus tube at 100 kv. and 5 milliamperes at a definite distance. The data should be recorded for that particular tube because the output of apparently similar tubes may vary very widely. All measurements of voltage should be with an accurately calibrated sphere gap.

Similarly, one may chart the machine set up for 125 kv. and 3 or 4 milliamperes for the same or a similar tube. The same procedure should be followed for the deep therapy tube, which will probably be used at 200 kv. and 4 milliamperes. One should, at the same time, decide upon the various degrees of filtration that one will use.—DR. JACOB FIERSTEIN, of New York, in *M. J. & Record*, Jan. 7, 1931.

Radiotherapy for Inflammatory Conditions

As shown by Dr. A. U. Desjardins, of the Mayo Clinic, in *J.A.M.A.*, Feb. 7, 1931, there is abundant evidence in medical literature of the therapeutic value of irradiation in inflammatory processes in various regions and organs, and the testimony is so generally favorable that one wonders why irradiation is not used more than it is.

Although some variation in dosage is to be found in the reports of different authors, the most noteworthy feature of such work is that the dose of rays is small or moderate. If the dose necessary to cause erythema of the skin is taken as 100 percent, the dose for acute and subacute inflammations is generally less than 50 percent and sometimes less than 25 percent.

A single exposure of a few minutes is sufficient, if the lesion can be irradiated through a single field. In some cases the treatment may have to be repeated once or twice, at intervals of from four to six or eight days; but if the inflammatory process does not respond to three separate irradiations it is not likely to yield at all.

Dr. Desjardins states that, after treating a large number of patients over a period of several years, he can testify that if, in some cases, radiotherapy remains without favorable effect, it has never had an unfavorable action. He

thinks that irradiation, even though it destroys the infiltrating protective lymphocytes, causes the protective substances contained by such cells to be liberated and to be made even more readily available for defensive purposes than they were in the intact cells.

Massage in Internal Medicine

As stated by Dr. Ralph Pemberton, in *J.A.M.A.*, May 23, 1931, the intelligent use of massage demands some knowledge of the benefits to be derived and the dangers resulting from improper or untimely use of it.

Massage has three chief indications in the arthritic syndrome: First, to improve or maintain adequate conditions of circulation and drainage in the neighborhood of involved joints; second, to improve or correct the faulty physiologic processes in the soft structures, especially the muscles; and third, to compensate somewhat for the lack of muscular activity that inevitably follows protracted local or systemic disability from arthritis or rheumatoid syndrome.

It should be a cardinal principle with application of massage in arthritis that treatment should never add by trauma to the inflammatory or otherwise diseased process already present. Technicians and patients are inclined to believe that, if a little is good, more will be better.

Under nearly all circumstances, massage directed to the neighborhood of joints must be unaccompanied by movements of the joints.

A definite contraindication to massage, most of all too-vigorous massage, is to be seen in cases, arthritic or otherwise, accompanied by fever or by any debilitating complication. The changes in the circulation induced by massage may easily be the means of carrying material from one part of the body to another and a blood clot may find a fatal lodgment in the heart, lungs or elsewhere.

Whatever the purpose of systemic massage, it must always be followed by an adequate period of rest—generally about an hour.

The use of massage is important as a contribution to the maintenance of health in the elderly or those with restricted direct exercise.

Effect of Heat on Ultraviolet Irradiation Edema

In *Brit. J. Phys. Med.*, May, 1931, Sir Leonard Hill and H. I. Taylor, from experimental and clinical observations, find that radiant heat has little effect on a mild erythema. Whether applied before or after an ultraviolet irradiation, the tendency seems to be to reduce, very slightly, the resultant erythema, but to increase the latent period. Such effect is negligible.

In the case of a stronger erythema, radiant heat seems to lengthen the latent period, but to increase the intensity of the resultant erythema. This effect is small, but is usually definite. No effect is noticed when the skin is irradiated at the same time as heated.

In the case of heat conducted by warm water the water being kept at a temperature of 41°C to 43°C, the latent period seems to be unaltered, but the resultant erythema is slightly more intense, whether the skin is heated before or

after ultraviolet irradiation. Conducted heat at the same time as ultraviolet irradiation does not affect the resultant erythema.

A skin irritant such as a mustard plaster increases the ultraviolet erythema to a marked extent, whether applied before or after the irradiation; the latent period however is lengthened.

The interesting point arises that the latent period may be lengthened while the resultant erythema is somewhat more intense.

Therapy with Long Wave Length X-Rays (Grenz Rays)

X-ray tubes of lithium borate glass emit x-rays of considerably longer wavelength than ordinary glass x-ray tubes. The same effects can usually be obtained by inserting a small lithium glass window in the ordinary tube opposite the cathode.

In *Radiology*, May, 1931, Drs. F. C. Wood and G. M. MacKee, of New York, state that with such apparatus, operating on about 8 kilovolts, the wavelengths obtained range from about 1.6 to 2.06 Angstrom units. These correspond to Bucky's grenz-rays and are well within the limits (15 A.U. to about 0.06 A.U.) of the x-ray wave lengths.

Because much of this radiation (assuming that it has an average wavelength of 2 A.U.) is absorbed in the epidermis and upper layers of the derma, the deep derma and subcutaneous tissues are not likely to be seriously damaged with amounts recommended for therapeutic purposes. Therefore, no deep, indolent, painful ulcers, that are so characteristic of third-degree roentgen and radium burns, have been reported. Four and even six times the erythema dose of short wavelength x-rays have been administered to small areas without provoking more than a mild second-degree reaction.

Grenz-ray radiation is a valuable therapeutic agent; but, though safer, it is less efficacious, less versatile and more time-consuming than x-rays of shorter wavelengths. The best field for the grenz-rays is in dermatology. Large doses may be employed with comparative safety. With tubes available at present, used at a skin-target distance of 6 cm., the exposed area of skin is a circle having a diameter of about 4 cm. The method is obviously not suitable for irradiation of universal, generalized or extensive eruptions.

Physical Therapy in Treatment of Deafness

In *Eye, Ear, Nose and Throat Monthly*, March, 1931, Dr. H. D. Thornburg, of Los Angeles, reports great improvement in a small series of cases of deafness by physical therapy and the use of the Knudsen audiometer.

A definite technic was consistently followed. The first step was a ten-minute application of diathermy, usually using the Eberhard diathermy

head set transmitting the current through and through the head, both from in front of the ear and through the mastoid. The milliamperage used varied from 300 to 700.

Following this, a ten-minute period of galvanism, treating each ear separately. The negative electrodes, using the usual moist pad, was held over the ear and the positive held in the opposite hand, using from 2.5 to 10 milliamperes.

The next step was ten minutes of the slow surging current, applied to each ear in turn, taking care to avoid painful stimulation.

Finally, the patient sat for ten minutes with each ear in turn directed toward and at a distance of ten inches from the auditor.

This treatment demands seventy minutes, with constant supervision. It is especially applicable to cases of conduction impairment. Otosclerosis is not helped by it.

BOOKS

Albrecht: Roentgen Diagnosis of the Digestive Tract

DIE RÖNTGENDIAGNOSTIC DES VERDAUUNGSKANALS; Einschliesslich Der Leber und Der Gallenwege. Von Privatdosent Dr. H. U. Albrecht, oberarzt an der medizinischen universitätsklinik, Frankfurt A.M. Mit einem geleitwort von Professor F. Volhard. Mit 828 Abbildungen. Leipzig: George Thieme. 1931. Price M. 56.—, geb. M. 59.—.

Although roentgen-ray investigation is only one of the clinical aids in the diagnosis of diseases of the digestive tract, yet within recent years this laboratory method has received such an impetus that no thorough clinical diagnostician can afford not to be acquainted with it, at least in so far as it may establish a tentative diagnosis.

Professor Albrecht's work is very thorough and up-to-date. It includes not only the stomach and intestines and organs immediately associated with them, but also the roentgen-ray investigation of the liver and biliary ducts. For those who read German it will be found a highly valuable reference book.

NEWS NOTES

D'Arsonval Honored

According to *Le Siècle Médical*, Paris, August 20, 1931, the grand cross of the Legion of Honor, of France, has been conferred on Professor d'Arsonval, the distinguished biologic physicist, whose name is familiar to all physical therapists.

THE • SEMINAR

CONDUCTED BY

MAX THOREK, M.D., (*Surgery*)
GEORGE B. LAKE, M.D. (*Medicine, Ethics and Economics*)

[NOTE: Our readers are cordially invited to submit fully worked up problems to the Seminar and to take part in the discussion of any or all problems submitted. Discussions should reach this office not later than the 1st of the month following the appearance of the problem.

Address all communications intended for this department to The Seminar, care CLINICAL MEDICINE AND SURGERY, North Chicago, Ill.]

PROBLEM NO. 8 (ETHICS)

Submitted by Dr. W. L. Casler,
Marquette, Mich.

(See CLINICAL MEDICINE AND SURGERY,
Aug., 1931, p. 580)

Restatement: A physician in general practice, who does a large amount of work in obstetrics and pediatrics, has fitted up, especially for the youngsters, a cubicle in his office, on the walls of which hang pictures of several of the babies he has delivered.

On the first birthday of every baby he brings into the world, he sends a neat and simple birthday greeting card, with a small picture of himself; the phrase, "Your first doctor sends you greetings on your first birthday"; and a pleasant little verse—nothing more. Neither his name nor address appears anywhere on the card.

Requirement: Can either of the practices mentioned, especially the sending of the birthday card, be reasonably regarded as violating the code of ethics?

DISCUSSION BY DR. EMMET KEATING,
CHICAGO, ILL.

As a side-light on this problem I quote from the last paragraph on the subject of advertising, in "Principles of Medical Ethics of the American Medical Association," published by the Chicago Medical Society:

"It is unprofessional * * * * to em-

ploy any methods to gain the attention of the public for the purpose of obtaining patients."

Of course, this is a very broad statement and impossible to follow in the strict letter of the law. The physician, whether located in village, town or city, who makes no effort to make contacts with people in his community, or to present an agreeable personality to the people in his community, will be doomed to failure, unless he has a connection with some well-advertised hospital that attracts patients who are referred to such a physician by the hospital authorities. No sensible person would expect this pronouncement of medical ethics to be considered as having such a narrow meaning.

The sending of a card, as described in this problem *might* be the simple and natural expression of a heart overflowing with the desire to bring happiness to others. The physicians working in the same community with the physician who sends cards of this kind will view the procedure with feelings that are a mixture of amusement and contempt.

DISCUSSION BY DR. EMIL C. JUNGER,
SOLDIER, IA.

My answer to the question is, No!

How long will the medical profession strain at a gnat and swallow a camel?

The doctor should continue to send the cards or pictures to the babies and do some-

thing—almost anything—that will show the community that he is a real, human doctor and one of them. He might even hunt up each youngster on its first birthday and kiss it or do something equally affectionate; and it will do him good and keep him young and useful.

If all of us would do more things of that sort our good influence would increase and most of the problems over which we worry would be solved.

DISCUSSION BY DR. J. LEWIS WEBB,
CHICAGO

This problem divides itself into several phases. Superficial consideration is apt to lead to tolerance; while contemplation of each phase leads to unconditioned condemnation.

If the friendship between client and physician is deep enough so that he loves to be reminded of the new baby, there is reason for collecting and displaying the pictures. Very few men are so constituted that they care to see pictures or hear stories about babies other than their own. It may be assumed that the display (claimed to be instigated by love) is a trick to fatten the doctor's income by using other people and their friendship. No doctor benefits by displaying a tendency to hypocrisy or mercenarism.

The Code of Ethics should oppose publicity stunts and showmanship technic. Unfortunately some individuals and methods enjoy special privilege. The display of pictures of the babies of prominent clients, or of many pictures, is nothing but showmanship publicity.

Many persons are embarrassed by their baby pictures when they grow older. Sometimes families change physicians. Under such circumstances the pictures are a possible source of unpleasantness.

There are laws that make it illegal to use pictures or testimonials without the consent of the person concerned. Business men take the precaution to cover such material by a contract. To be binding a contract must always include a "consideration." When such material is used it may always be presumed that a "consideration" has been paid. Physicians can not consider becoming entangled in a course that brings paid-for testimonials.

Social good taste forbids the display of trophies, gifts or testimonials, except to

intimate friends, and then only when they request it. This display of pictures is in bad taste socially, and physicians usually find that bad taste is costly from an economic standpoint.

The sending of the birthday card is permissible when demanded by the depth of friendship. It is a pure commercial gesture otherwise and places the physician on the level of others who solicit for magazines, laundry, vacuum sweepers, etc. Note that the card is sent to the baby, who did not employ the doctor and who cannot read or enjoy the artistic decorations, nor comprehend the pretty verse. The real purpose is to "reach" the mother, who was the real patient, and the father, who pays the bills, yet it is addressed to neither one.

In the course of years the ordinary family makes contact with family doctors, ophthalmologists, surgeons, gynecologists, and others. It may be presumed that a friendship of some degree is always established. Which of these should be barred from sending New Year's greetings and birthday cards? The public certainly would not be favorably impressed by a medical profession collecting pictures and mailing pretty cards.

DISCUSSION BY DR. R. S. MACARTHUR,
LOS ANGELES, CALIF.

A sympathetic physician must necessarily be conscious of a fatherly interest in all the children he has delivered, and it would be in this spirit that he sends them a birthday card as a token of friendly esteem and interest in their welfare. This amicable action could not be construed as a breach of professional ethics.

DISCUSSION BY DR. F. B. YOUNG,
GERING, NEB.

It is my opinion that such procedure as arranging pictures of baby patients on the wall and sending them birthday cards of the character described is not unethical. I consider that such practices are matters of taste, rather than of right and wrong.

If this physician is truly in love with this class of practice (pediatrics and obstetrics) and his patients become to him warm and intimate friends, as is so often the case, it is wholly right for him to do these things. If, on the other hand, his women and children patients are simply so many more dollar-makers in his life, then it becomes wrong and possibly unethical for

him to pursue such tactics. Such a procedure would not appeal to me, as it is foreign to my nature to use such tactics; but, on the other hand, I have good friends in the practice whose integrity I have never had the inclination to question, who do similar things. I feel that they are well within their rights, for I feel that they are honest in their attitude.

It will be seen that my interpretation of the right and wrong ethical attitude in this case resolves itself down to the individual. The longer I live and the more I see of people, medical and otherwise, the more I am inclined to take this attitude in many cases. It seems to me that the Code of Medical Ethics has not kept pace with the times and that many of its details might be changed, with advantage to the profession and the public. It is not necessary to go into the particular matters in need of change, but merely to suggest to each doctor that he get a new copy of the present Code and read it carefully.

It is not to be understood that the Code be destroyed or thrown away, but that it be revised to accord with modern conditions. Many other lines have found it necessary to change some of their rules and laws—even the churches, the banks, and other ultra-conservatives.

The spirit of medical ethics may be stated in few words: Be honest; be true to yourself and your patient; be tactful; be gentlemanly, in dealing with other doctors and the laity. Honor and honesty, combined with tact and gentleness, will meet all the requirements of any code of ethics and render all the rest of a code simply interpretative interpolations. The doctor who is not honest and honorable and tactful and gentle with his patients, his public and his confreres, cannot be ethical, even though he follow the letter of the Code in its most minute detail, for in these relations it is the spirit rather than the letter that counts.

If the doctor who presents this problem is pursuing his course in an honest and honorable manner, he is within the spirit of the most rigid ethical requirements. If it is but one more method of advertising and he is doing it because of selfishness and for self-advancement, he is not right in any sense of the word. It is better that we give more attention to the spirit of right and less to technical interpretations of a law.

CLOSING DISCUSSION BY DR. GEO B. LAKE, CHICAGO

The varied opinions on this little problem in medical ethics are decidedly interesting, and suggest that such matters are subject to individual interpretation.

My own idea is that the sending of this birthday card is a pleasant gesture of friendly interest and is a matter of personal feeling, having nothing whatever to do with ethics.

There is a strong tendency, in this bustling age of mechanical devices for doing all things whatsoever and of mass production, for physicians to forget that both they and their patients are *human beings*, and to curdle the milk of human kindness in their breasts with large portions of the acid of stereotyped and ill-digested ethics or pseudo-ethics.

I feel that, if the doctor wishes to continue sending the birthday cards and decorating his baby cubicle in any way he sees fit, no one has any business to say him nay.

PROBLEM NO. 10 (SURGICAL) *Presented by Dr. Max Thorek, Chicago*

A male patient, 44 years of age, white, an inmate of a state-institution (for the treatment of dementia praecox), was admitted to the hospital on April 30, 1931, with a *working diagnosis of right inguinal hernia*.

His family history was negative. Some form of operation had been performed, some years ago, on the left spermatic cord. From the history obtained he, in all probability, had a hydrocele of the cord.

The patient complained of a protrusion in the right inguinal region, which has been present for the past twelve years. The mass, in itself, does not give him any discomfort, except that, upon physical exertion and coughing, he suffers considerable pain.

The general physical condition of the man is good. His blood pressure is 120 over 80. The physical examination, as well as the examination of the urine and blood, are essentially negative.

After a few days of preparation, the patient was operated upon, under gas-ether anesthesia.

An oblique incision was made, parallel with Poupart's ligament, and the right inguinal region exposed. The inguinal canal was opened and the hernial sac isolated

and separated from the spermatic cord. The opened sac disclosed the presence of a large portion of the great omentum, which was of rather firm consistency, with considerable induration, and contained many tortuous vessels. A portion of the omentum, about the size of the palm of the hand, was resected. The omental stump was cared for by exact hemostasis and returned to the abdominal cavity. A modified Bassini operation was done and the patient returned to bed in good condition.

In view of the tendency of the patient to keep his hands about his genitalia, the forearms were restrained and a male nurse placed in charge.

The temperature following the operation mounted, on the first postoperative day, to 101.6°F., after which it declined, so that on the sixth day it was normal. The pulse rate was never over 100 per minute.

The patient remained in the hospital for fifteen days, after which he was discharged, with the wound satisfactorily cicatrized.

Nothing was heard from him for a couple of months, when it was learned that he was taken to another hospital, where the abdomen was explored and, following a biopsy, a diagnosis of probable malignant disease in the abdominal wall and abdominal cavity was made, and the removal of the tumor was advised.

The patient was then readmitted to the American Hospital and the following history obtained: The man stated that he was kicked in the abdomen, two weeks after his discharge from our hospital. A tumor then gradually developed at the site of the trauma (on the right side), between the umbilicus and the symphysis pubis. This increased in size and, two weeks prior to returning to us, he had noticed that the "lump" opened and discharged blood mixed with "slime." The patient states that he has observed, simultaneously, the passage of a similar discharge from the rectum.

A physical examination disclosed that

the scar from the inguinal operation was completely healed. A fresh longitudinal incision was found, about five inches long, beginning about one inch above the umbilicus and terminating above the inguinal scar.

The wound was gaping and from its depths a sero-sanguineous discharge issued. We could obtain no report on the findings of the exploration and biopsy done at the other hospital.

The patient was kept under observation for a few days, during which time he had a slight fever (99 to 100°F.). His pulse rate was around 100 per minute, and his general condition seemed good.

The physical examination, at this time, was essentially negative. The tissues surrounding the open wound were indurated, and a palpable mass, about the size of a man's fist, was found. Rectal examination revealed tenseness, with pain on pressure toward the right side.

The blood examination disclosed the following: Coagulation time, 2½ minutes; hemoglobin, 85 percent; erythrocytes per c.mm., 4,470,000; leukocytes per c.mm., 8,900; lymphocytes, 29 percent; polymorphonuclear neutrophils, 70 percent; basophiles, 1 percent.

The urine showed a few granular and an occasional hyaline cast. There was a trace of albumin; a few epithelial, and 25 to 30 pus cells, per high-power field.

To summarize: Here is a man who had undergone, over two months ago, an operation for inguinal hernia, with resection of the omentum, remaining in the hospital two weeks; after which he left with the wound satisfactorily cicatrized. Two months later, he returned with a condition, as described, following an injury to the abdomen. Tumor is diagnosed after biopsy, and exploration at another hospital.

Requirement: What is the probable diagnosis? and what treatment would you institute?

SUICIDE

The grim specter of want, poverty and suffering, both physical and mental, has dethroned the reason of untold thousands and driven them to destroy themselves. Is there no hope of relief, is there not some solution to this serious problem? The United States is about the only country that does not have a National Old Age Pension.—DR. J. H. CLEAVES, Los Angeles, in Med. Herald and Physic. Therap., Feb., 1930.

THE · CLINIC

INTERNAL MEDICINE

Abnormal Respiration Rates

By Florence Gustafson, M.A., Binford Throne, M.D. and C. N. Myers, Ph.D., Brooklyn, N. Y.

DURING the last few years metabolism has played an important role in the observation of patients suffering with all types of clinical disturbances. From the academic point of view much progress has been made. However, from the diagnostic viewpoint, much experimental work needs to be done. As a result of research, the promiscuous prescribing of endocrines is the subject of much ill-advised therapy. A laboratory checkup on the diagnosis of hypo and hyper conditions has revealed many startling situations. The continued application of powerful adjuvants has also directed our attention to the many dangers associated with this empiric procedure.

With these ideas in mind, our research department has carefully checked several thousand cases coming to the out-patient department of the New York Skin and Cancer Hospital. These cases cover diseases of adolescence such as acne, menstrual disorders and other conditions which have been alleged to be associated with glandular function. The irregularity of diagnosis by dermatologists, internists and surgeons was so striking that, in our service, no glandular therapy is prescribed until its necessity is established by all known procedures and its continuance is shown, by clinical tolerance and laboratory methods, to measure functional restoration. At this time it is only necessary to refer to our previous investigations on this subject, as related to basal metabolism in dermatologic conditions, by Throne and Myers¹ (1929) and

to our more recent studies on alopecia areata² (1930).

In carrying out these determinations, all of the technic of experience with metabolic procedures has been carefully employed. The care in the preparation of the patient has been most carefully studied by one of us (G) and the methods employed by Benedict followed meticulously. During the process of making these examinations certain irregularities are carefully noted, and at this time these unusual abnormalities are being presented, because of the confusion that would result in any emergency hospital should a patient of this type present himself for medical study or if, as a result of accident, the patient should be brought into the accident ward. The question of what should be done would be extremely difficult for the clinician to decide and the therapeutic measures might be extremely hazardous to the unconscious patient.

Brief reference to the literature has shown that Lev and Hamburger³ (1925) reported the following cases.

Male, aged 44. The patient was in the hospital for observation and the history showed that paroxysmal auricular tachycardia had developed when he was a small boy, while playing football. He could bring this condition about at will by exercise, by turning and by lying on his right side, and the attack could be ended by deep breathing, bending at the waist, raising the leg, stretching or standing erect against a wall. The fluroscope revealed slight wid-

ening of the ascending aortic arch just above the base of the heart, amounting almost to a diffuse aneurysm at this point.

The patient was brought into the clinic for a study of basal metabolism in organic heart diseases, and rested the usual half-hour before the test. An electrocardiogram was taken and lead II showed a normal sinus rhythm, with a solitary extrasystole, probably of auricular origin. The basal metabolism test was done on a Roth-Benedict metabolism apparatus and at the same time an electrocardiogram was made, which showed a sinus rhythm with a rate of 67. The metabolism test showed a rate of 6 percent minus and 4 1-3 respirations per minute. The patient then induced a paroxysm of tachycardia by turning and lying on his right side, and a metabolism test and electrocardiogram were made simultaneously. The electrocardiogram record was 187; the metabolism rate 5.1 percent plus; and the respiration rate 7½ per minute.

A second case reported by the same authors was a normal medical student, aged twenty-two. His basal metabolism rate was 1.6 percent minus; pulse rate, 70 per minute; and respiratory rate, 6.6 per minute. Upon introducing artificial tachypnea the respiration rate was raised to 20 per minute; the basal metabolism rate was 15.9 percent above normal; the pulse rate, 76.

Clinical studies in respiration made by Peabody, Wentworth and Barker⁴ showed cases having 8 and 8 to 9 respirations per minute respectively. The first case had mitral stenosis and insufficiency, auricular fibrillation and chronic arthritis. The vital capacity was 3770 cc.; tidal air, 581 cc.; alveolar CO₂, 3.98 percent; and the basal metabolism rate was 11 percent below normal. The second case had chronic myocarditis, aortic insufficiency, mitral insufficiency and stenosis. The vital capacity was 3750 cc.; tidal air, 639 cc.; alveolar CO₂, 4.15; and the basal metabolism rate 10 percent above normal.

Benedict⁵ reported a case of an apparently normal young lady with a respiratory rate of 3 to 5 times a minute. She inhaled 3 pints of air at one time, whereas an ordinary person takes in and expels only one pint. Her lung capacity was normal, the air passing through her lungs was normal in amount and the amount of oxygen she extracted from it was also normal.

The low rate of respiration is an unusual observation and may present an anomalous

clinical situation, from a diagnostic point of view. To the emergency surgeon, the internist and the cardiac specialist, these slow respiration cases might offer difficulties, unless routine basal metabolism examinations are carried out, and it appears that these five cases offer sufficient reasons for expansion of metabolic studies.

It is of particular interest that these patients showed no cardiac disturbances. The cardiogram tests on these cases were kindly carried out for us at St. Lukes Hospital, through the courtesy of our colleague, Dr. William Bayard Long. Expert medical scrutiny was provided through this service, thus giving an unbiased interpretation.

CASE REPORTS

Case 1: M. M., female, aged twenty-three, whose weight was 123 pounds, with a height of 5 feet ¼ inch.

A routine basal metabolism test was carried out on the Roth-Benedict metabolimeter. The pulse rate before the test was 75; during the first test, 60 and the second 58; the blood pressure was 100/70; the buccal temperature was 98.2°F.; the respiration rate, 4.3 in the first test and 4.2 in the second; the basal metabolism rate - 8.3, using the average of the percentage deviation from the DuBois and Harris-Benedict predicted standards, which were - 9.0 and - 7.6, respectively.

The vital capacity of the lungs was measured by means of a spirometer and found to be 3100 cc. The tidal air was 1200 cc., which figure is about two and one-half times greater than the average tidal air.

The x-ray picture showed that the heart, aorta and diaphragms were normal.

Blood chemistry, which is always done as a routine examination, was as follows: NaCl, 471.0; sugar, 103; urea nitrogen, 18.9; uric acid, 3.1.

Case 2: I. K., female, aged thirty-one, whose weight was 168 pounds, with a height of 5 feet 1¾ inches, entered the New York Skin and Cancer Hospital for treatment of "psoriasis."

The patient was referred for a routine basal metabolism test on October 25, 1929. Two basal metabolism tests were carried out on the Roth-Benedict metabolimeter. The pulse rate before the test was 60; during the first test 56 and the second 58. The buccal temperature was 97.8°F. The respiration rate in both tests was 5.5 per

minute. The basal metabolic rate was - 9.35 percent, using the average of the percentage deviation from the DuBois and Harris-Benedict predicted standards, which were - 8.7 and - 10.0, respectively.

On account of the slow respiratory rate the patient was requested to return for a check-up on the test and the respiratory rate, and did so on November 1, 1929. During the intervening time there had been no change in weight. The pulse rate before the test was 69; during both tests, 61; the temperature was 97.8°; the respiration rate during the first test was 5.8 and during the second, 5.5; the basal metabolic rate was - 5.15 percent, the average of the percentage deviation from the DuBois and Harris-Benedict predicted standards, which were - 4.5 and - 5.8, respectively.

The vital capacity of the lungs was measured by means of a spirometer and found to be 3415 cc. This figure does not seem abnormally high when the vital capacity of women 5 feet 4 inches or less measures from 2500 to 3820 cc. The average value for the vital capacity of women, based on body surface, is 2.07 liters per square meter. The value of this patient was 2.15 liters per square meter, which is a deviation of only 4 percent. The tidal air was between 830 and 975 cc. This figure is considerably above the average, which is about 500 cc. of air entering and leaving the lungs with each respiration.

The x-ray picture showed a heart moderately large in size. The aorta and both diaphragms appeared normal. There was some thickening throughout the lung fields, but no evidence of tuberculosis. The x-ray plates taken at full inspiration and at full expiration showed a diaphragm excursion of well over one inch. The diaphragm on the left side, though showing free excursion, appeared to be higher than the right.

The electrocardiogram which was made on this patient was normal in every respect.

The blood chemistry tests which were done on the patient were normal:

NaCl	Sugar	Urea N	Uric Acid
462.7	108.6	12.8	2.74
483.5	94.8	14.1	2.57
446.0	107.3	14.7	1.97

Case 3: D. B., female, aged twenty-eight, whose weight was 97 pounds, with a height of 5 feet 2½ inches, entered the New York Skin and Cancer Hospital for treatment of "alopecia." The patient was referred on November 19, 1929, for a

basal metabolism test, at which time the unusually low respiration rate was observed. The first test showed a respiration rate of 7.5 times per minute; second test, 7.0 times per minute. The pulse rate before the test was 80 per minute and remained the same throughout the entire test. The buccal temperature was 97.0°F.; the basal metabolic rate was - 21.3.

The patient was requested to return for another test on December 4, 1929, two weeks later. During that time she had gained 2 pounds. The pulse rate was 64 before the test and 68 per minute throughout the test. The temperature was 97.4°; the respiratory rate was 5.6 times per minute in first test, and during the second test was 6.0; the basal metabolic rate was - 20.65.

The vital capacity of this patient was 3200 cc., being 2.25 liter per square meter, or 8.6 percent above the average. The tidal air was between 900 and 1100 cc.

The x-ray picture showed that the heart, aorta and diaphragm were normal in appearance. A slight thickening was noted throughout the lung, but no sign of a tuberculous infiltration. This patient showed a very wide excursion between the expiration and inspiration. On inspiration the diaphragm was found at the level of the 9th rib, posteriorly; on deep inspiration it sunk to the level of the 11th rib, giving an excursion of a full two inches.

The electrocardiogram which was made on the patient showed a rate of 75, with sinus arrhythmia. This irregularity is without pathologic significance. The electrocardiogram presents the normal deflections and shows, by varying spaces between the P deflections, that the cardiac impulses have been generated at slightly irregular intervals.

A blood chemistry examination is always made as a routine, and the results were normal: NaCl, 462.7; sugar, 90.7; urea N., 16.6; and uric acid, 2.0.

Case 4: This patient was referred to us from another clinic for a basal metabolism test, therefore it was impossible to obtain a complete examination. Female, age 37, weight 119 pounds, height 5 feet 5 inches. She entered the clinic for treatment of "rosacea." The buccal temperature was 98.0°F.; the pulse rate before the test was 64 and throughout the test was the same; the respiration rate for the first test was

7.8 and the second test 5.1 times per minute. The deviation from the DuBois predicted standards was - 5.3 and from Harris-Benedict - 2.2, the average deviation being - 3.7 percent.

Two days later, on September 11, 1930, the patient returned for a repeat test. The weight remained unaltered; the temperature was 98.4°; the pulse rate was the same as in the first test (64); the respiration rate was 6.4 and 6.5 times per minute; the average basal metabolic deviation was +2.15 percent; the tidal air was 725 cc.

Case 5: E. L., female, aged twenty-four, weight 132 pounds, height 5 feet 3 inches, no clinic history. The pulse rate before the test was 64 and during the test was 60; temperature, 97.8°F.; respiration rate of the first test, 6.75 and of the second, 5.6 times per minute; the average basal metabolic deviation was - 12.5 percent. The tidal air was about 930 cc. As in all of the other cases, this was above normal. The vital capacity was 3800 cc. (about 10 percent higher than normal) and figured 2.28 liters per square meter of body surface.

The x-ray picture, taken at full inspiration and full expiration, shows a heart moderate in size; the aorta and both diaphragms appear normal and show an excursion of 2½ inches; there is some thickening of the bronchial tree throughout the lungs, but no masses were seen and no evidence of tuberculosis; the electrocardiogram was normal in every respect; the blood chemistry tests showed: NaCl, 479.3; sugar, 104.6; urea nitrogen, 10.2; uric acid, 2.66.

A few moments' consideration reveals the fact that at these rates, it would require less than one respiration for the average sprinter to run one hundred yards. Furthermore, these patients have been unconscious of these abnormal respiratory

conditions and, in general, have experienced no untoward symptoms. Their irregularities were discovered only as a result of routine examination. It is of peculiar interest that our five patients were all women. The basal metabolism rates in the literature indicate the a lowered rate may prevail just as frequently among males as females, and therefore no particular significance is attached to the sex in our five cases.

SUMMARY

1.—Accompanying slow respiration rates, we have found a basal metabolism rate slightly below normal, with the exception of one case in which it was only 2 percent above.

2.—No unusually slow pulse rate accompanied these slow respiratory rates.

3.—The literature reports as many slow respiratory rates among women as men.

4.—Few cases seem to be due to organic heart trouble, and the four cases reported by us show no heart or lung involvement; therefore, the reason for this slow respiratory rate in normal people is still open to further research.

5.—If a closer observation of the respiratory rates of people who come to clinics and hospitals were made, we would probably find that this is not an unusual phenomenon.

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ADVERTISING AND MEDICINE

Advertising is a profession, just as Medicine is. The medical men should call in consultants in advertising to study their problems and to suggest remedies, just as the advertising men would call in a medical consultant in a case of physical illness. Physicians should no more attempt self-medication in their advertising troubles than they would advise their patients to pursue the same course in their physical ills.—CARL W. JONES, editor Minneapolis Journal, in *Bul. Chicago M. S.*, July 18, 1931.

CLINICAL · NOTES AND PRACTICAL · SUGGESTIONS

The Use of Bifocal Glasses in Children

TO MOST general physicians and to very many ophthalmologists it is still an occasion for surprise to see a young child wearing bifocal glasses. The idea of bifocals is so exclusively associated with the idea of the loss of accommodation in later life that the knowledge that they also have a place in treating the strabismic eyes of children comes as a surprise to most physicians.

The profession is indebted to the late Doctor George Suffa, of Boston, for this important addition to our resources in treating the most common of all forms of strabismus—the convergent, commonly called “cross-eyes”. This is due to an anatomic defect of the eye-ball, hypermetropic in nature, which requires an over-strain of the mechanism of accommodation for clear vision, even at long distance and, of course, an extreme strain for all vision at near points. Now the physiologic association between the functions of accommodation and convergence is so intimate that an over-stimulation to accommodation is not possible without a stimulus to convergence of probably equal degree. In hypermetropic errors, therefore, especially when not equilateral and when compound in nature, this stimulus is often so great that the excessive action of the internal recti muscles pulls one eye completely out of coordination with its fellow and cross-eye results.

Once this has begun, the normal impulse to parallelism, always weak in infancy,

tends rapidly to disappear and, unless correction is made early, life-long damage is certain to result. In early cases it is sometimes possible to re-establish the ocular balance merely by putting on the proper distance correction, the accommodative effort then being required only for near vision, as in normal eyes. But in many cases this is not sufficient, because even the normal accommodative effort still produces excessive convergence, and the usual resort then is to one of two procedures, both highly undesirable: the wearing of over-correcting lenses, and surgery of the eye muscles.

The use of over-correcting lenses is usually a failure, because, while it does ease the accommodative strain at near points, it introduces the worse complication of blurring all distance vision and discouraging the development of the fusion impulse so vital at this stage. It was to meet this situation that Doctor Suffa made his very ingenious and valuable contribution. He gave a slight under-correction for distance and added a bifocal lower segment, sufficient to remove nearly all necessity for accommodation at near points. This gives the patient clear and enjoyable vision at all distances, with accommodative effort temporarily almost suspended, and a resumption of binocular vision often spontaneously occurs. The use of the eyes at all distances now becomes a pleasure, instead of an effort, and the normal tendency to develop the fusion impulse is

resumed. As normal binocular vision becomes firmly established, the strength of the lower segment in the bifocals is gradually diminished, and it is finally eliminated entirely.

Naturally there are many other factors that must have attention in each of these cases. The restoration of these defective eyes to normal is a matter requiring the most expert and the most painstaking attention for a period of years, and no single device or procedure can solve the problem. A period of educational training is usually necessary, requiring the intelligent cooperation of the parents for a considerable time. The holding of the parents to their part of the program is often the most difficult part of the undertaking. Dealing, as they are, with matters, to them, rather mysterious; hearing as they must, all sorts of silly advice and suggestions; and exposed as they are to the propaganda of ignorant faddists and charlatans, it is not surprising that they sometimes make foolish moves and throw away the results of months of patient and successful work.

The family physician, therefore, should be able to help them with a general knowledge of the modern management of these conditions, and he should know that the use of what he has considered "old peoples' glasses" on a child is not a freak idea, but a refinement which may save the patient from a surgical ordeal or from a lifelong defect.

BURTON HASELTINE, M.D., F.A.C.S.
Chicago, Ill.

Biologic Sterility

IN ADDITION to the various forms of sterility which are generally recognized, due to some anatomic or physiologic abnormality in either the man or the woman, there is another purely biologic form which occurs only in the particular pair under consideration and is not due to either one separately.

Experiments have shown that the uterus contracts or relaxes in the presence of semen, certain specimens causing one effect and others the other. If contraction results from the semen of a certain male, that union will be sterile, although either partner may be fertile in another union. So far as we now know, sperm and the substance of the crystalline lens are the only

tissue-specific antigens in the body. Studies are now being made in the serology of fertility.

Those who are disturbed by the size of the birth control clinics in certain cities would be encouraged to see our large sterility clinic.

RAPHAEL KURZROK, M.D.
New York City.

Nursing the Doctor's Hospital Patients

THE chief problems the doctor faces in obtaining proper nursing care for his hospital patient arise from the fact that doctors, and patients, often feel that the hospital nursing service is not adequate for the patient's needs, though in many instances the type and severity of the case do not seem to justify the expense of a special nurse.

Understaffing of nursing departments and dependence on student nurses for the greater part of the bedside care given, are two major reasons given for dissatisfaction with hospital nursing service. Were a general nursing service of adequate quality and quantity provided by all hospitals, the often heavy expense of the "special" might be done away with in a large number of cases.

Somewhere in the neighborhood of 2,000 hospitals at present operate nursing schools as part of their nursing departments. When the bedside care given patients in 1,338 of these was studied on a typical day, it was seen that only 18 percent was given by graduate nurses. Fully 64 percent, or more than three and one-half times that amount, was given by the student nurses, of whom there are now about 83,000 in the training schools. The rest of the care was given by maids, orderlies and attendants.

Hospitals, in some cases, are studying the problem from the point of view of the cost of a larger graduate staff; the ease with which capable accredited graduates may be secured; and the organization of a smooth-running graduate nurse staff.

Some smaller hospitals have already discontinued their training schools because they found their patients were much better pleased with the care given by a graduate nurse staff, and that the change meant little or no additional expense to the hospital. Some, indeed, found that a grad-

uate staff would actually be less expensive than a good training school. In some instances, the added expense of a graduate staff is distributed among all the patients, by a slightly raised room charge. This charge is more than made up for to the patients by the fact that many of them can save the cost of a special nurse, and are sure, at the same time, of obtaining good nursing service.

MARTHA DREIBLATT
Committee on the Grading
of Nursing Schools

New York City

Small Hospitals Have a Real Opportunity Today

THE FOLKS in the small hospitals in small communities can take heart from the fact that the small hospital today is enjoying a higher percentage of occupancy than the large hospital.

The reason is that the people in the small communities cannot afford the extra costs of going to the big medical centers and they more readily accept their surgical talent and service at home. In many cases, of course, they get just as fine results.

We find many of these 15-, 20- and 25-bed hospitals are running from 80 to 100 percent full, while the big hospitals of 100 and 200 or more beds are not able to enjoy this high proportion of bed occupancy.

It is an ideal time for the small hospitals to become more firmly entrenched in the hearts of the people.—*American Stories*.

Salicylic Acid

SALICYLIC Acid has become one of the most frequently used drugs in the pharmacopeia. This is perhaps due to the fact that most, if not all, of the remedies popularly employed in the treatment of epidermophytosis and trichophytosis contain this medicament.

Salicylic acid is the main ingredient of Whitfield's ointment, the premier remedy for epidermophytosis.

R Ac. Salicylic gr. xx.....	1.3
Ac. Benzoic gr. xx.....	1.3
Olei Coconucis ʒii.....	8.0
Petrolatum Alb. ad ʒi.....	30.0

For the removal of corns, salicylic acid is applied in the form of a pigment.

R Ac. Salicylic ʒi.....	4.0
Collodion flexile ad ʒx.....	40.0

In some hospitals the preparation is modified as follows:

R Ac. Salicylic ʒi.....	4.0
Ext. Cannabis Indica gr. xx.....	1.3
Collodion flexile ad ʒi.....	30.0
or	
R Chrysarobin gr. xxx.....	2.0
Ac. Salicylic gr. xx.....	1.3
Collodion flex. ad ʒi.....	30.0

The well known Lassar's paste contains salicylic acid, though some dermatologists prefer this combination without it.

R Zinc Oxid. ʒiv.....	16.0
Amyli Pulv. ʒiv.....	16.0
Ac. Salicylic gr. xx.....	1.3
Petrolatum alb ad ʒi.....	30.0

Salicylic acid is used in subacute and chronic eczema, in psoriasis, pityriasis, lentigo, seborrhea, erythema multiforme, erythema nodosum and intertrigo. For excessive sweating, it is used in a dusting powder.

R Ac. Salicylic	3 parts
Pulv. Amyli	10 parts
Pulv. Talc	87 parts

Compound Zinc Ointment contains this acid:

R Zinc Oxid. gr. xxx.....	2.00
Ac. Boric gr. xxx.....	2.00
Ac. Salicylic gr. x.....	0.65
Adipis Lanae Hydrosi ʒii.....	8.00
Petrolatum alb. ad ʒi.....	30.00

Salicylic acid paste is as follows:

R Ac. Salicylic gr. x.....	0.65
Zinc Oxid. ʒii.....	8.00
Amyli ʒii	8.00
Petrolatum ad ʒi.....	30.00

This paste is sometimes combined with tar:

R Liquor Picis Carbonis ʒi.....	4.0
Pasta Ac. Salicylic ad ʒi.....	30.0

or with resorcin and sulphur:

R Resorcini gr. xv.....	1.0
Sulphur praecip. gr. xv.....	1.0
Pasta Ac. Salicylic ad ʒi.....	30.0

In treating ringworm of the feet with Whitfield's ointment, it is well to spread the ointment freely over the affected areas, and bandage. The infected skin becomes white and later exfoliates, leaving healthy skin underneath.

R. S. MACARTHUR, M.D., C.M.

Los Angeles, Calif.

CLINICAL MEDICINE AND SURGERY is the most practical journal, among a dozen or more, that I receive—N. E. R., M.D., Weatherford, Okla.

Stomatologic Autonomism

DR. KING S. PERRY brings the old dilemma back upon the stage, in the July, 1931, *CLINICAL MEDICINE AND SURGERY* (p. 477).

Tons of controversial ink have been spilled over this problem, and I do not aspire to add materially to this wastage.

John Wesley's creed appeals to me:

"Do all the good you can,
By all the means you can,
In all the ways you can,
In all the places you can,
To all the people you can,
As long as ever you can."

On the other hand we often hear it said, "Let well enough alone, even if the consequence is disaster."

The graduate in medicine who, by personal application and ardent study, familiarizes himself intimately with the anatomy, physiology and pathology of the human organ we designate as the eye, we call an ophthalmologist.

Ophthalmology is defined as being that branch of medical science that treats of the eye. Stomatology is defined as being the sum of scientific knowledge concerning the mouth. Wherein does any biologic or physiologic cleavage enter as between the eye and the mouth organs?

My solution (if it be a solution at all) is to have all study medicine, in every way that the word implies, and then allow each graduate, according to his peculiar fitness or bent, to practice the profession of medicine. If this leads one to take up more minutely and hence make a more definite and thorough study of ailments peculiar to the eye, and another those peculiar to the mouth, not forgetting in the process their interrelation and interdependence on the whole human organism, all is good and well. We can go on calling the former an ophthalmologist and the latter a stomatologist.

The need for the word, dentistry, having been submerged in the one word medicine, sets the solution in operation. A new orientation of the meaning of the word, physician, therefore becomes manifest.

Until we all quit seeing our only point of contact as one of conflict, we are out of joint with the plan of our being. All this involves more of a change in our mental attitudes than in the things themselves. We need to reduce these several phases of one unit to their least common denom-

inator, which will compel all humanologists to cease serving profits and learn to value such learning as they may possess, for the service it renders.

A change is already here and we might as well recognize it. The change need not, of itself, bother anyone. It is nature's order.

We physicians and dentists have each been correctly reporting what we have seen and experienced. The trouble has been that, while these reports have been true, they have not been comprehensive. We have only been seeing in part, and the human organism, by that much, has suffered and suffered needlessly; and through channels that have no excuse for being.

If the main objective of any business or profession is merely an economic good, that business or profession is surely doomed. This covers all our so-called specialties in medicine. It is axiomatic, that any method is only as good as its fruits.

Physicians are charged with keeping every part of the human machine normally at its work, that the whole may be in trim to meet the exigencies of existence. We are health guardians and not utilitarians.

JOHN BUTLER, M.D.,

Hawk Point, Mo.

Radio Medical Advice at Sea

A RADIO service, as picturesque as the sea itself, ministers to seafaring men ill or injured on vessels far from port with no surgeon on board. The master of a freighter, bending anxiously today over one of his men and wondering how he can save his life, may be a thousand miles from a hospital, but he is as close as his radio room to the best of medical advice. Radio's well-organized free medical first aid service sees to that.

The possibility of using the modern wonder of radio to fill a need which had been felt since men ventured to sea was seen first, as might be expected, by a veteran of the sea, Captain Robert Huntington, principal of the Navigation Marine Engineering and Radio School of the Seamen's Church Institute of New York. In the ten years since it was established by the Institute, and later taken over by the Radio Corporation of America as a free service to all navigators, it has brought a new and happy ending to much suffering on shipboard, which previously had been unavoidable.

The big idea came to Captain Huntington in 1921, and Henry A. Laughlin, of Philadelphia, was so enthusiastic over the possibilities that he gave \$5,000 to install a powerful radio station on the roof of the Institute. Night and day shifts were kept on this station, KDKF, and calls for first aid advice came rolling in. The Public Health Service cooperated by having physicians under its jurisdiction prescribe promptly for each case, on the basis of the symptoms as described by radio.

Even the fact that calls on the radio medical aid service have run into the thousands does not give the true picture until it is considered that nearly every one of those thousands of cases was urgent; many a matter of life and death. These hardy seamen do not worry over a mashed finger. Probably the best idea of the work is gained from the unadorned messages themselves. For example, this exchange between the S.S. Hahira, somewhere at sea, and the Radiomarine Station at Palm Beach, Fla.:

Our pumpman badly gassed by crude oil fumes. Has palpitating heart. Seems to stop then begin, at intervals.

Master S.S. Hahira

2:10 P.M.

The reply:

Master S.S. Hahira—Artificial respiration in fresh air necessary. Administer aromatic spirits of ammonia and apply cold cloths to head. If possible give hypodermic of amyl nitrate or nitroglycerine. Please advise progress

Pittman, M.D.

Delivered at 2:12 P.M.

At 3:48 P.M. this word came by radio to Dr. Pittman in care of "Medico", the code designation of all free radio first aid messages:

Many thanks for medical advice. Applied remedies. Man apparently fully recovered unless he gets a relapse. He is being watched.

Master S.S. Hahira.

So the messages which flash between the ships and "Medico" through the Radiomarine stations range. The Marine Hospital in New York City advises treatment that brings relief to a seaman suffering from a severe oil burn; pneumonia is diagnosed successfully on a description of symptoms and the patient is cured by treatments outlined by a succession of radio messages, although his temperature had run to 104°F. and his lungs were badly congested. Stories of advice on how to replace dislocated bones pop up, and radio advice leading to quick diagnosis and isolation of contagious disease victims takes an important place.

Into the succession of dangerous acci-

dents and illnesses which the free radio service records there comes once in a while a most unusual report. This is one which made the physicians at the Marine Hospital in New York show mild surprise:

Please advise antidote for aspirin poison. Man took about seventy tablets after being intoxicated. Tablets taken during past week.

The hospital advised a treatment and asked for more symptoms if the patient did not respond. Full recovery was indicated by the fact that no more was heard from the man whose "hangover" headache was bad enough to suggest such an extreme remedy.

Even on the great ocean liners, when the ship's surgeons have to perform emergency operations, consultations have been held by radio with specialists who previously had treated the patient. But the real romance of the free medical aid service is found on the smallest vessels, on which the crew faces the greatest rigors of the sea, and the master, with a small store of medical supplies, must be the doctor in desperate illnesses or serious accidents suffered by men under his charge. In these emergencies it is surprising how clearly these weathered sea captains report symptoms in their radio appeals, giving every detail necessary for the diagnosis. In this, a handbook called "Ship Sanitation and First Aid" has been a great help. It was prepared by Robert W. Hart, surgeon, in cooperation with the United States Public Health Service. Questions to be answered in describing symptoms are outlined definitely. A glossary of medical terms is included and anatomic charts marked in plain words. A sea captain, used to meeting unusual situations, can find the points of the human body, from the occipital region of the skull to the dorsum of the foot, as accurately as he reads the point on his compass, and frequently his radio consultation with the physician ashore would do credit to a general practitioner.

Radio companies serving other parts of the world—Norway, Sweden, the Philippines, Honduras and tropical districts—have followed the lead of the Radio Corporation in volunteering their services free of charge. Every year the calls upon the service increase and every year finds its value more strikingly proved.

ARCHIBALD R. MANSFIELD, D.D.

New York, N. Y.

Left-Handedness, Stammering and Word-Blindness

THE child who is backward in school is by no means always lazy or mentally deficient.

We have heard a good deal, of late, about the child who has trouble with his school work because of defective vision or hearing, but less attention has been given to those who are left-handed, who stammer and who suffer from word-blindness.

It may seem strange to many that the conditions grouped in the title of this article are really closely related, but it becomes clearer when we realize that all the brain activities having to do with words—whether we hear, speak, read or write them—are carried on in neighboring and closely associated areas of the gray matter.

Another interesting fact is that the two halves of the brain and spinal cord are almost exact *mirror images* of each other. Those functions which are performed by the two halves of the body separately—such as motion and feeling in the arms and legs—keep their nerve paths all on one side; but where two organs work together to produce one result—as in sight and smell—the impressions of the two must be united or one side must take over all the work.

In matters connected with words the latter method has been adopted. Right-handed people handle words with the left side of the brain, and vice versa. Sometimes, however, the connecting lines become partially or wholly crossed and when this occurs the person *sees* the word, but the image of it is carried to the wrong side of the brain, so that he *perceives*, not the word as it is but a more or less accurate *mirror image* of it, so that it seems spelled backward and does not make sense. Such a person is said to be word-blind, and requires very careful training to enable him to straighten out the tangles and get on with his school work.

The intimate connection between the various word centers is interestingly shown by the fact that, when an attempt is made to teach a left-handed person to write with the right hand, it frequently tangles up the center for spoken words so that he begins to stammer. This stammering will promptly cease if he is again permitted to write with his left hand.

Another interesting fact is that, when

one tries to write with the hand which is unaccustomed to this service, it is easier to write "mirror writing"; that is, so that when it is held before a mirror it can be read in the reflection. This is of practical importance when the hand with which one habitually writes is temporarily disabled and he must use the other. If a piece of carbon paper, carbon side up, is placed under the paper on which he writes "mirror writing" with his unaccustomed hand, the impression on the back of the sheet can be read straight forward.

The problem of these various defects in the management of words is now being studied intensively by several investigators and we should soon be in a position to offer constructive suggestions for the relief of those so handicapped.

GEORGE B. LAKE, M.D.

Chicago, Ill.

Don't feel that I could conscientiously do without CLINICAL MEDICINE AND SURGERY. — F. W. S., M.D., Tacoma, Wash.

Stem Pessaries in the Uterus

THE clinical note by Dr. Levine, in the February, 1931, issue of CLINICAL MEDICINE & SURGERY, page 136, reminded me of a similar experience in my own practice.

On June 26, 1928, I was called to see a multiparous woman, aged 26 years, who complained of intermittent abdominal pain and admitted slight menstrual irregularity for several months, but was sure she could not be pregnant, as a stem pessary had been introduced about eight months previously to prevent that possibility.

A vaginal examination revealed a small fetus, in breech presentation, emerging from the uterus, and along with it a long, hard object, which proved to be a gold stem pessary.

The premature infant (5½ to 6 months) weighed 2¾ pounds and lived for nine hours.

E. L. COBERLY, M.D.

Toledo, Wash.

Another

Dr. Levine's little article in the February, 1931, CLINICAL MEDICINE AND SURGERY leads me to report a case of the same kind.

Several years ago, a woman, recently come from another city, consulted me because she had missed two menstrual periods, but "could not be pregnant, because her former physician had inserted a "gold button" into her uterus and guaranteed that she would never become pregnant while she wore it."

On examination I found a two-to three-months' pregnancy, but no "button."

In due time, the patient was delivered, spontaneously, of a normal healthy child; and when I examined the placenta I found a gold stem pessary embedded in it.

To this day I cannot understand why that foreign body in the uterus did not produce abortion.

R. GITTELSON, M.D.

Cleveland, Ohio.

[These two cases, with Dr. Levine's and that of Dr. A. E. McMahon, reported in the June, 1931, *CLINICAL MEDICINE AND SURGERY*, page 439, bring the total of these paradoxical reports up to four.

The cervical stem pessary is a widely used method of contraception which, in spite of its obvious dangers, has held its popularity, because of its supposed complete reliability.

Now that the fallacy of this supposition appears to be demonstrated (there are probably scores of unreported cases, if four have been reported), it would seem that physicians would turn to the more modern and satisfactory mechanico-chemical method advocated by the American Birth Control League, which, in the hands of intelligent and civilized persons, is harmless, esthetically acceptable and successful in preventing conception.—Ed.]

Cervical Erosion

YOUR editorial, "Free Medical Literature," calls to my mind an experience I had recently. Somewhere I saw something about the use of neo-silvol in the treatment of excoriations of the cervix. This ad. I was unable to find again, but the idea stuck in my mind, as I had had very unsatisfactory results from any treatment I have been able to find suggested in any textbook.

Acting on the suggestion found in this ad. I had a 10-percent solution of neo-silvol prepared and have used it now for several months in all my cases of erosion of the cervix. Two of these cases I am sure were of gonorrheal origin; one in a young woman six months pregnant, who had the most severe case of inflammation of the cervix I have ever seen. There was a profuse discharge of bloody mucus that produced chafing of the vulva. The slightest touch to the cervix with a cotton-wrapped applicator would cause bleeding. One application of the neo-silvol stopped all bleeding and a few applications so nearly cured her that I felt I could safely discontinue the treatment.

W. W. SHAFER, M.D.

Haines City, Fla.

When I discuss medical journals with a confrere, I always tell him I get more useful pointers from *CLINICAL MEDICINE AND SURGERY* than from any other journal I take.—A. J., M.D., Montreal, Que., Can.

Am delighted with your journal. Am enclosing check for renewal subscription. Would feel lost without it.—G. F. H., M.D., Blackshear, Ga.

TONSILLECTOMY IN THE OFFICE

Whether tonsillectomy should be performed in the hospital or in the office depends largely upon the office. In a one-man office, with but a single attendant, it is not advisable. But in an office with a chief and assistants or associates who are thoroughly competent and nurses who are properly trained, it would seem that this operation can be performed as safely as it can be done in a hospital, and there are many advantages for the patient. It is assumed that there is, in connection with such an office, an operating room with an equipment equal to that of any hospital operating room.—DR. W. W. PEARSON, Des Moines, in *Am. J. Surg.*, Feb., 1930.

THE · LEISURE · HOUR

Return Unto Thy Rest

Return, return, the shepherd's voice is calling
O'er breezy heights and pastures rich and sweet,
While on the landscape fall the softening shadows,
And earth and sky in dim embraces meet.

The flocks graze leisurely along the hillsides,
Or lie at ease in pools of leafy shade,
Heedless alike of sheepfold and of shepherd,
Until his evening voice sounds through the glade.

But now they surge, in soft and woolly tumult,
By lane and mead, to where that clear voice calls;
One steadfast star gleams in the purple twilight;
The gates close safely, and the deep night falls.

And thus they rest in green and quiet pastures,
And yet at eve for quiet folds they yearn;
O soul of man, so weary with thy wandering,
Unto thy resting place return, return.

THOMAS G. ATKINSON, M.D.

Chicago, Ill.



Prayers for the Prolapsed

A negro preacher at the camp-meeting said to his congregation:

"Now ef any of you all has anything you want us to pray foh special jus' tell us."

A large sister arose and said: "I sho would like to have youall pray foh mah floatin' kidney."

"Floatin' kidney!" exclaimed the pulpit orator. "Why, sister, we uns don't pray foh no floatin' kidneys. We ain' got nothin' to do with anatomy roun' heah."

"You hain't?" responded the sister. "All las' week you was done prayin' for loose livahs."—*Bul. Fla. Dent. Soc.*

They say a certain Manatee county dentist, who had been fixing his radiator, came out into the reception room with a hammer and pair of pliers in his hand. Ten patients bolted for the first door!—*Manatee County Journal*.

Hilarious Party

"Comin' to mah pahty, Sam? We gonna have a whole gallon o' cohn."

"Nup, can't do it, Zeek. We'se got a case o' tonsilitis over to my house."

"A whole case! Say, Zeek, can't we have that pahty to yo' house?"—*Bul. Fla. Dent. Soc.*

Careful! Careful!

"Can you see that cow ruminating under that tree?" That's all I said, your honor, and she socked me.

The nose, a physician says, is a feature which never changes. Unless, of course, it's poked once too often into other people's business.—*Life*.

The increase in wet sentiment should be a warning to bootleggers and hijackers. If they do not mend their ways, they will have their law taken away from them.—*New Yorker*.

It Makes a Difference

Boss: "A man is never older than he feels. Now this morning I feel as fresh as a two-year old!"

Steno (sweetly): "Horse or egg?"—*Blue Flame*.

Indignant Wife (to incoming husband): "What does the clock say?"

Semi-Plastered Husband: "It shays 'tick-tock,' and doggies shay 'bow-wow,' and cows shay 'moo-moo,' and little pussy-cats shay 'meow-meow.' Now ya shatisfied?"—*Collection Service*.

"Has your husband any hobbies?" asked the neighbor who was calling.

"No," said Mrs. Tuggle, "he has rheumatiz a good deal, and hives now and then, but he ain't never had no hobbies."—*N. Y. S. Magazine*.

Liars

"Folks," said the colored minister, "the subject of my sermon dis evenin' am 'Liars.' How many in de congregation has done read de 69th chapter of Matthew?"

Nearly every hand in the audience was raised immediately.

"Dat's right," said his reverence. "You is just de folks I want to preach to. Dere is no 69th chapter ob Matthew."—*Patch' work*.

Got 'Em Going and Coming

Fifty-two others were reported as injured, either by ambulance surgeons who attended them at the scene of the accident, or by physicians to whom they went for treatment later in the day.—*New York Times*.

Patient: "I'm afraid, doctor, that there's very little hope for me."

Dr. Cutter: "Nonsense! If you survive the experiments I'm going to make on you, you may live for months."—*American Stories*.

DIAGNOSTIC · POINTERS

Extraperitoneal Pelvic Conditions in Women

Extraperitoneal pelvic conditions are found from time to time in women. Such patients may be supposed to have tubo-ovarian or appendiceal abscesses, but in 3 of this kind of cases seen by the writer the patients were suffering from right-sided, extraperitoneal *broad ligament abscesses*, caused by a streptococcus. The recognition and proper treatment of such conditions is a matter of great importance, as it can easily be appreciated what would happen if the peritoneal cavity were opened and the streptococci in the abscess scattered through it.—DR. L. BRADY, Baltimore, in *J.A.M.A.*, Aug. 2, 1930.

The Thyroid and Youthfulness

The thyroid is the gland of youth. Hyperthyroidism is expressed, in one way, by a more youthful general appearance than the real age verifies. On the other hand, hypothyroidism is found in those persons who are prematurely senile looking.—DR. L. PASCAULT, in *Le Monde Méd.*, Paris, June 15, 1930.

Sterility

One should never blame the female for an apparent childless marriage until the male has been proven fertile and free of venereal disease. The main causes of sterility in the female are constitutional, endocrine and other defects, cervical lesions and non-patent fallopian tubes.—DR. R. S. CRON, in *Wisconsin M. J.*, April, 1930.

Diagnosis of Prostatic Enlargements

Air cystograms are less disturbing than is cystoscopy. The best cystograms are obtained with the patient's face downward and the Roentgen tube tilted toward the

feet 20 degrees from a right angle. A catheter is previously passed and 50 cc. of a one-percent solution of procaine injected into the bladder. After the patient is in position, the procaine is drawn off and 100 to 150 cc. of air is injected with a piston syringe. Pressure of not more than 15 to 20 millimeters of mercury is required for the air injection. The air is allowed to escape while the patient is still in a prone position. Hematuria, bleeding upon the introduction of the catheter and blood in the procaine solution as it returns through the catheter are definite contraindications for the injection of air into the bladder. Although cystoscopy and air cystograms are to some extent objectionable, they have definite advantages and the information gained by their use makes it possible for the surgeon to reach a decision as to the correct course to advise, in order to minimize the dangers of prostatic obstruction.—DRS. E. G. BALLENGER, O. F. ELDER, and H. P. McDONALD, in *Urol. & Cutan. Rev.*, June, 1930.

Smooth Tongue in Deficiency Diseases

Smooth tongue is very frequently seen accompanied by achlorhydria, but especially in some types of deficiency disease, particularly those in which anemia is a symptom.—DR. G. E. LEWIS, in *Practitioner*, Lond., Dec., 1930.

Chronic Sinus Infection and Systemic Disease

The study of 750 patients upon whom radical sinus operations have been performed shows that chronic sinus infection plays an important part in the causation of certain groups of systemic diseases. More patients suffering from chronic sinus disease fall into the category of chronic bronchitis and asthma than into any other

group. Chronic septic arthritis comes next.—DRS. N. W. JONES and F. B. KISTNER, Portland, Ore., in *Ann. Intern. Med.*, Jan., 1931.

Sterility and Contraception

The opposition to birth control, based on the assumption that the employment of contraceptive means is responsible for sterility, is relatively new. I can recall from my own practice quite a number of cases of early pulmonary tuberculosis in young married women, where I had advised contraceptive methods until I could declare the disease to be absolutely arrested and allow impregnation. The result was invariably a healthy mother and a healthy child.—DR. S. A. KNOFF, of New York, in *M. J. & Record*, Oct. 15, 1930.

The Aschheim-Zondek Reaction For Pregnancy

The Aschheim-Zondek reaction for pregnancy is based on the presence in the urine during pregnancy of large amounts of anterior pituitary hormone.

In *Surg. Gynec. & Obstet.*, Oct., 1930, Dr. H. C. Mack, of Detroit, reports that, in 53 normally pregnant women, the reaction was positive in all; in 35 non-pregnant women, all but 1 showed a negative reaction; in 12 abnormally pregnant women there were 11 positive reactions.

The reaction offers a very reliable laboratory method for the early diagnosis of uninterrupted uterine and extra-uterine pregnancy. The test is made by injection of the urine into immature female mice and a subsequent histologic examination of the ovaries.

The Retinal Vascular Changes in Hypertension

I believe that a majority of patients with hypertension of the essential type have some stenosis of the retinal arterioles, although it may be minimal. If the changes in the retina are confined to mild narrowing of the caliber of the arteries, and if these changes do not increase in severity after a reasonable lapse of time, the hypertension ordinarily may be assumed to be benign.

If it can be assumed, as justified by histologic studies, that the processes observed in the retina are going on also in the arterioles throughout the body, it must be admit-

ted that arterial constriction or spasm is the most dangerous element of hypertensive disease; that it may be the primary factor that results in arteriosclerosis; and that it is largely responsible, if not for the hypertension itself, at least for the retinal, cerebral and renal complications. It would seem that efforts should be directed especially to the discovery of the cause and to the relief of this tendency to arterial, or rather to arteriolar, constriction.—DR. H. P. WAGENER, of the Mayo Clinic, Rochester, Minn., in *Ann. Intern. Med.*, Sept., 1930.

The High Operative Mortality in Acute Appendicitis

The reason for the present high operative mortality in acute appendicitis is because the time for operation has not been well chosen or because, if opportunely timed, operation has not been complete, due either to poor surgical judgment or to lack of experience or to both.

The time to operate is before the onset of peritonitis, if possible. In practically all cases of circumscribed peritonitis, operation can be safely done at once with the proper technic; deferring operation is the best policy in the presence of diffused peritonitis.—DR. JOHN B. DEEVER, of Philadelphia, in *Surg. Gynec. & Obstet.*, Oct., 1930.

Atrophy of Subcutaneous Fat Due to Insulin Injections

Prolonged hypodermic administration of insulin sometimes causes atrophy of the subcutaneous fatty tissues in the vicinity of the injections, as was observed in a case reported. There are reports of 34 similar cases in the literature.—DR. JOHN B. NICHOLS, of Washington, D. C., in *Am. J. M. Sc.*, July, 1930.

Nondiabetic Glycosuria

In *Am. J. Med. Sc.*, June, 1930, Dr. A. W. Rowe and Mary McManus, of Boston, report that they have studied a number of patients showing glycosuria, but without demonstrable evidence of diabetes.

Such glycosuria has been seen in patients with or without endocrine disturbances.

The authors think that the phenomenon of glycosuria is no more than one common

end-result of a wide variety of causes, many of which cannot be demonstrated to produce the effect through influence on or by the function of the pancreas. It is deduced that there are a number of factors concerned with the regulation of carbohydrate metabolism of which the intrinsic function level of the islands of Langerhans, although most important, is but one.

Functional Dyspepsia

The main causes of functional dyspepsia are nervous; the asthenic type reflects a condition of nervous exhaustion and the hypersthenic type a state of nervous hyperexcitability. Overwork, worry, emotional strain—these are the important causes and, looked at from this point of view, functional dyspepsia is really only a sign of a functional disorder of the nervous system—DR. R. HUTCHINSON, London, Eng., in *Canad. M. A. Jour.*, Aug., 1930.

Salpingitis and Appendicitis

In salpingitis, the area of maximum tenderness is above Poupart's ligament. In appendicitis the area of greatest tenderness is at McBurney's point. Rigidity is always one-sided in the early stage of appendicitis. It is usually two-sided in salpingitis. The pelvic examination in appendicitis is negative, unless the disease secondarily involves the right tube or ovary, or unless the appendix is surrounded by exudate. In appendicitis the uterus is not fixed. Appendiceal collections are usually more prominent in McBurney's point; tubal collections are nearly always anchored low in the pelvis.—DR. B. MANN, of Philadelphia, in *M. J. & Record*, July 2, 1930.

Iritis

Iritis in a luetic individual may be due to dental or other infection, and not to syphilis.—DR. C. A. VEASEY, Spokane, in *Northwest Med.*, June, 1930.

Urethral Caruncle in the Female

From a study of 23 cases of urethral caruncle in the female, as reported in *Surg. Gynec. & Obstet.*, July, 1930, Dr. C. T. Olcott, of New York, finds that the epithelium of caruncles of the female urethra frequently shows enough infolding to make

their actually benign nature appear doubtful to one who is not familiar with this particular structure. Because of this, some cases have been extensively operated upon, on the erroneous diagnosis of epithelioma.

Compound acinar glands, similar to those described by Skene, are frequently present in the female urethra. They were present in 17 of the 23 cases studied. These glandular structures may be an important factor in the formation of caruncles.

Neurasthenia

Neurasthenia, which for many years we have classed as a neurosis, ought to be considered as an affection of the endocrine system. One of its chief symptoms is arterial hypotension.—DR. D. DUBOIS-ANDRÉ, in *Le Monde méd.*, Paris, July 1, 1930.

The Endocrines and Psychoses

Study of endocrine conditions in definite psychoses, of psychic conditions in definitely demonstrated endocrine disorders and of psychic reactions to administration of endocrine preparations containing known hormones, are three of the roads which may lead us to more knowledge.—DR. PETER BASOE, of Chicago, in *Endocrinology*, May-June, 1930.

Appendicitis

In a male child with a gangrenous appendix, the right testicle will be retracted.—DR. W. AMBROSE MCGEE, Richmond, Va.

Emotional Shock and the Gastro-Intestinal Tract

There is good reason to suspect that many patients with anxiety neurosis, with depressed or maladjusted emotional conflicts, have been deprived of appendixes and gall-bladders without pathologic changes, or submitted to gastroenterostomy and other plastic operations, when the real issue was not with an organic disease, and the subjective complaints for which they were undertaken still obtain.

The treatment, in general, indicated in cases in which psychic, traumatic or emotional cause can, with fair reason, be suspected or determined, may be approached from two angles: One is distinctly psychologic, having as its purpose the effecting of

a readjustment; the other is through sedative medication without, however, clouding the consciousness.—DR. G. A. MOLEEN, Denver, in *J.A.M.A.*, Sept. 27, 1930.

Ocular Neuroses

I wish we could banish the term eyestrain from our vocabulary. The fact of the matter is that the eye is provided with a large factor of safety and that healthy eyes do not become diseased by excessive use. In neurotic individuals with supposed eye troubles, very frequently the psychologic factor is not taken into account. I firmly believe that ophthalmologists produce more neuroses than they cure. There is far too much changing of lenses a fraction of a diopter or a few degrees of axis, because it is the path of least resistance. I believe that ophthalmologists should take more pride in not prescribing glasses and in changing a minimum of glasses, than in the number of prescriptions issued. What the patient really needs is a careful analysis of his condition and an explanation of how his various ocular aches and pains should be interpreted and treated.—DR. GEO. S. DERBY, Boston, in *J.A.M.A.*, Sept. 27, 1930.

Medico-Legal Value of an Autopsy

A colored woman came to the hospital completely paralyzed from the waist down and died a few days later. She gave a history of having been in a recent fight, during which she was stabbed in the back with an ice pick, and had fallen across an iron rail on her back, causing pain of which she complained. Her opponent was arrested after her death and charged with murder. An autopsy, however, clearly showed that death was due, neither to the relatively shallow ice-pick stab nor to the fall on her back, but to a tumor involving two thirds of the spinal cord at a point opposite the tenth dorsal vertebra.—DR. W. P. BUTLER, Shreveport, La., in *Tri-State M. J.*, July, 1930.

Heart Troubles

The welfare of the patient with an incompetent heart is, of course, the prime consideration; he is in immediate danger and must be given first aid without too much discussion of the academic question as to how and why he came to the distressing condition. But it is important that the physician should know causes. The outlook for the future and the subsequent treatment may depend much upon such knowledge. A heart muscle, incompetent from a suddenly developing infarct due to an acute coronary thrombosis, may have an entirely different prognosis and treatment from the myocardium that has been slowly but progressively failing, from the development in it of patches of fibrosis due to gradual occlusion of many coronary twigs. The group of cases called cardiac neuroses may depend on psychic causes.—DR. JAS. B. HERRICK, of Chicago, in *J.A.M.A.*, Nov. 29, 1930.

Jaundice

Whether to physician or to surgeon, the first and most important significance of jaundice is the possibility of stoppage of the bile ducts. Although the icteric index and other methods have been more or less in vogue, it is remarkable how little information about obstructive jaundice has accumulated—information about what happens when the ducts are stopped and bilirubin accumulates.

It is the custom of surgeons to operate and relieve stoppage, not bothering about the jaundice, once its significance is clear. Consequently, there is some knowledge about the distribution of bile pigment, but there is not the exact information necessary to an understanding of the patient whose stoppage is within the liver itself or whose stoppage is associated with disease of the liver as well. It is the duty of the surgeon to furnish this help to physicians.—DR. M. A. BLANKENHORN, of Cleveland, in *J.A.M.A.*, Oct. 11, 1930.

PLANNING TO LIVE

A man of seventy years plans work for twenty years more. He will probably live longer because he has done so. The trouble with most of us, when we reach seventy, is that we plan to die, instead of planning to live.—G. W. SIBLEY.

Current · Medical · Literature

Iron and Copper in the Treatment of Anemia

In 1928, Hart, Steenbock and associates reported their finding that iron alone was inadequate to bring about regeneration of hemoglobin in anemia, but on the addition of a small amount of copper, regeneration took place rapidly. From these and the experimental investigations of others it can be concluded that copper and iron have a definite bearing on blood regeneration in anemia.

In J.A.M.A., April 4, 1931, Dr. M. S. Lewis, of Nashville, Tenn., reports his clinical results in the application of iron and copper therapy in the secondary anemias of children, based on 34 such cases observed and treated during the past two years. These children were observed for a sufficient time before and followed for a sufficient time after the iron and copper treatment, and the effects were controlled by similar clinical cases, treated by iron therapy alone.

In the 34 cases, the maximum red blood cell count before treatment in any one case was 3,500,000; the minimum 2,800,000. The hemoglobin concentration was: maximum, 60 percent; minimum, 45 percent. After treatment the maximum count was 5,500,000; the minimum, 3,100,000; average 4,700,000. The test for hemoglobin showed: maximum, 95 percent; minimum 60; average, 85 percent.

No case of nutritional secondary anemia failed to respond to iron and copper. In all the 34 cases there was a marked gradual improvement in the blood picture, except in cases that were due to infection, but after the subsidence of infection blood regeneration again proceeded at a normal rate.

The author concludes that iron and copper, given in combination to children with nutritional and secondary anemia, was more effective than iron given alone. This was particularly noticeable in the nutritional series.

Viosterol in Pregnancy

It has long been observed, in a general way, that pregnancy frequently is disastrous to the bony structures of the mother, especially the teeth, and that condition is placed on a scientific basis by the work reported by Dr. G. C. Richardson, of Chicago, in Ill. M. J. for June, 1931, who frequently finds the blood-calcium of pregnant women to be low, and never above normal.

The added burden of a rapidly-growing fetus places a heavy strain upon the calcium-phosphorus metabolism of the mother, and Dr. Richardson declares that fully 75 percent of

pregnant women suffer from some degree of tetany, manifested by cachexia; muscular weakness; muscular pain and contraction (cramps), particularly in the legs; puffiness of the face, hands and fingers; tingling or numbness of the fingers or extremities; increased brittleness of the teeth; and thinning and brittleness of the nails.

To correct this condition and relieve these symptoms, Dr. Richardson gives 20 drops of viosterol (250 D), three times daily during pregnancy and finds that, under this treatment, any varicosities present recede; there is a marked reduction in postpartum bleeding; the condition of the teeth is improved; and the patients have a feeling of increased strength and wellbeing. The coagulation time of the infants' blood was decreased, so that none developed cerebral hemorrhage, and no ill effects were observed.

As always when viosterol is being administered, the diet should be adjusted so as to insure an adequate supply of calcium, this element being added, in the form of calcium gluconate or lactate, if there is any possible doubt as to the supply available in the diet.

Spinal Anesthesia and the Use of Ephedrine

In J.A.M.A., July 4, 1931, Dr. J. S. Lundy, of the Mayo Clinic, Rochester, Minn., expresses the opinion that decision to use spinal anesthesia by means of injection with procaine, depends essentially on the degree of relaxation considered necessary for the operation, although pulmonary diseases, and such diseases as diabetes, also influence one to choose spinal anesthesia.

This procedure, according to the author's experience, is best carried out by bearing in mind that: (1) the rate of injection should be constant, 0.5 cc. each second; (2) the point of injection should correspond to some extent to the site of operation, but should never be higher than the interval between the twelfth thoracic and first lumbar vertebra; (3) as a routine, the number of cubic centimeters of spinal fluid in which the dose of procaine is dissolved should be increased in proportion to the extent cephalad to which it is desired to produced anesthesia; and (4) the dose administered must be a safe one. For persons of average size, the safe dose is about 1 to 1.25 mg. for each pound (0.5 Kg.) of body weight.

It is essential that readings of blood pressure be taken before, during and after the administration of a spinal anesthetic. To maintain blood pressure, the author has had success with intramuscular administration of ephedrine (0.025 to

0.050 Gm.), immediately before the anesthetic is administered subdurally. However, in cases of hypertension, it is best not to administer the ephedrine until just after the procaine has been deposited subdurally.

In the experimental laboratory, ephedrine given intravenously, intramuscularly or subcutaneously to animals usually raised the blood pressure to a satisfactory level after it had been lowered by a spinal anesthetic, provided the pulmonary ventilation is sufficient to avoid anoxemia. When the ephedrine is given subcutaneously, its effect may be intensified by massage of the area into which it has been injected. Even when its blood-pressure-raising effect seems to have ceased, massage of the area in which it has been deposited will sometimes renew the ephedrine effect.

Gratifying results may be obtained by administration of oxygen alone, or of oxygen about 95 percent and carbon dioxide 5 percent, during the operation, when blood pressure falls, if periods of nausea occur. When these agents are insufficient to control the nausea, one may find effective the administration of nitrous oxide up to 85 to 90 percent or of ethylene 70 to 85 percent; whether nitrous oxide or ethylene is used, the remainder is oxygen, to make 100 percent.

Vitamins and Digestibility of Food

An editorial in *J.A.M.A.*, May 2, 1931, discusses the relation between vitamins and the digestibility of food, especially of fat, as follows:

There are certain as yet unidentified substances, without which nutritive failure results. These food factors have been classified according to the symptoms and structural changes appearing in experimental animals given diets lacking the appropriate vitamin. Ocular changes, renal calculi and metaplasia of epithelial cells occur in the absence of vitamin A; polyneuritis and anorexia characterize a deficiency of vitamin B; a weakening of the endothelium of capillaries seems to be the fundamental change brought about by a lack of vitamin C; defective utilization of calcium and phosphorus results when vitamin D is absent; and without vitamin G there occurs a more or less characteristic dermatitis.

In experimental animals subjected to a deficiency of any of the recognized accessory food factors, cessation of growth occurs. These reproducible observations serve as indexes of disturbed body functions but thus far few data are available bearing on the precise mode of action of the vitamins.

In a recent investigation, St. Julian and Heller have examined the digestibility of fats, carbohydrates and proteins, in experimental animals subjected to the appropriate vitamin deficiency. The animals were given the incomplete food until the store of vitamins was depleted; the missing factor was then given to part of the animals, which thus served as controls. Studies in metabolism were then made. No difference in the digestibility of fat, carbohydrate and protein was demonstrated between the groups given the complete ration and those in which the diets lacked vitamins A, B, C, D or G. In spite of the functional disturbances and structural alter-

ations in the various deficiencies produced, the mechanical and chemical factors in digestion apparently proceeded normally. In view of the frequency with which the gastro-intestinal tract is the seat of obvious disturbance in vitamin deficiencies, this result is surprising. The conclusion seems warranted that the primary locus of action of the accessory food factors lies in those cells more strictly responsible for the major portion of the metabolism of the body.

Treatment of Pulmonary Tuberculosis by Gold Sodium Thiosulphate

An editorial in *L'Indépendance Méd.*, Par., Mar. 15, 1931, regarding the treatment of pulmonary tuberculosis by gold-sodium-thiosulphate states that, in order to avoid complications, the study of many hundreds of clinical cases has shown that it is best to start treatment with small doses, namely 0.05 or 0.1 Gm. and to rapidly increase to 0.25 Gm. In the case of feverish hospitalized patients, the dosage often reached 0.5 or 0.75 Gm., according to the circumstances. Intervals of 8 to 10 days are interspersed and medication is resumed, usually with a dosage of 0.25 Gm.

This medication may be employed in all types of pulmonary tuberculosis, provided, however, that it should not be used in the case of tuberculous patients with syphilis which is being treated with mercurials or the arsenicals.

In about 45 percent of the cases treated there has been a rapid disappearance of subjective and objective symptoms, as compared with the 5 percent spontaneous recovery from these symptoms when gold-sodium-thiosulphate is not employed in similar cases. X-ray examination shows a progressive clearing up of the lung conditions.

The article continues that the results obtained with the treatment of pulmonary tuberculosis with gold-sodium-thiosulphate are sufficiently remarkable to justify its being a recognized antituberculous therapeutic agent.

Barbiturates in Ether and Oil with Quinine for Obstetric Analgesia

As stated in *Anesth. & Analg.*, March-April, 1931, M. L. Axelrod, D.D.S. (anesthetist), of Cleveland, based on the experience gained from 100 obstetric cases, finds that barbiturates added to ether-oil-quinine, administered rectally, eliminate the use of drugs in obstetrics which may seriously affect the baby.

A barbiturate soluble in oil is selected. One gram of the barbiturate, added to 2½ ounces of ether, 1½ ounces of oil (olive or mineral), 3 drams of alcohol with 20 grains (1.3 Gm.) of quinine gave best results. The instillation dosage was arranged according to weight. Patients weighing 130 pounds or over received the full contents of the 4-ounce mixture; patients between 100 and 130 pounds received three-fourths of the contents; patients of 100 pounds or less half the contents.

The average duration of analgesia, with plain quinine-ether-oil, was about 3 hours; whereas,

with the barbiturate added, light anesthesia for from 10 to 15 hours was available.

Labor pains were not interfered with and no late after-effects were observed. The babies were in excellent condition. In almost every case breathing was spontaneous.

The Muirhead Regime in Addison's Disease

In the spring of 1920, A. L. Muirhead, professor of pharmacology at Creighton University, Omaha, presented himself, at the Mayo Clinic for treatment for Addison's disease in an advanced stage. Together, he and Rowntree worked out the Muirhead régime. Epinephrin was given hypodermically and by rectum three times a day and the whole adrenal gland, by mouth, three times a day up to his maximum tolerance. This Rowntree has named the Muirhead régime and to date has reported twenty-eight cases so treated.

The principle of the treatment is the administration of epinephrin by bowel and hypodermically and the whole gland or cortex by mouth to the point of tolerance, which varies widely with the individual case. The untoward results which may occur are general weakness and tremors with palpitation: from rectal injection, tenesmus: and from oral administration of the whole gland or cortex, nausea, vomiting and intestinal cramps. The other therapeutic measures employed are rest, moderate exercise, diet, outdoor life and sunshine.—Dr. C. W. SHIRLEY, of Los Angeles, in *M. J. & Record*, May, 6, 1931.

A New Pathology and Treatment of Chronic Alcoholism

In *M. J. & Record*, May 6, 1931, Dr. E. S. Cowles, of New York, considers that the pathologic changes due to chronic alcoholism are an irritation of the meninges and edema of the brain, which arouse an instability of the emotions and a craving for alcohol. The manic-depressive manifestations of these patients disappear as the intracranial pressure is relieved by lumbar puncture and the irritation removed. The lumbar puncture should not be done for a week after the patient has been free from alcohol: in chronic cases alcohol is present in the spinal fluid up to six weeks after the patient's last period of drinking.

The author's method of freeing the patient from alcohol is to put him to bed, give him four tablespoonfuls of elixir of paraldehyde, followed by high colonic irrigation, and two hours later two vegetable cathartic pills and a glass of Pluto water. The following day the patient is given ten grains of a chloral-bromide solution, this to be followed by four tablespoonfuls of castor oil and two colonic irrigations one in the morning and one at night. From the very beginning of his treatment the patient is induced to drink all the lemonade with bicarbonate of soda that he can possibly take, and for the first six weeks he is given a salt-free diet. No alcohol whatever is permitted.

In twelve hours after beginning the treatment

the patient is apparently normal. The trembling is removed by small doses of the chloral-bromide solution, of which only one dose is given in twenty-four hours. The second night the patient is given two tablespoonfuls of elixir of paraldehyde, and thereafter needs nothing to induce sleep, so far as his alcoholism is concerned, but, if necessary, the chloral-bromide solution may be given to overcome his emotional instability.

In no case of alcoholism is any narcotic drug permitted. The duration of the treatment is dependent upon the abnormal increase in the spinal fluid pressure and the pathologic findings in the spinal fluid. Until these patients are clear of their pathologic conditions, as evidenced by spinal fluid pressure and laboratory findings, they are subject to relapse.

The Inhalation Method of Resuscitation from Asphyxia of the Newborn

As stated by Dr. Y. Henderson, of New Haven, Conn., in *Am. J. Obst. & Gynec.*, Apr., 1931, the large majority of babies that breathe spontaneously nevertheless retain for hours or days or even for weeks undilated areas in their lungs. Pneumonia, consequent upon such atelectasia, causes two-thirds of all the deaths in the neonatal period—nearly as many, in fact, as the total of still-births.

For the nonbreathing newborn child, the author favors the simplest apparatus: A small cylinder of a mixture of oxygen and 7 percent carbon dioxide; a mask to enclose the face; and a rubber bag of only 2 or 3 liters capacity, with a valve or stopcock at the end. The bag is filled and the cylinder shut off. The mask is held on the face while the bag is squeezed to make a gentle pressure sufficient to cause a succession of slight dilatations of the child's lungs. Then, as spontaneous breathing begins, the inhalation is continued. Or, if desired, mouth-to-mouth dilation may be used and then the inhalation administered.

It is the inhalation and its stimulating effects upon natural breathing, rather than any form of artificial respiration, that is most important.

This inhalation should be given several times a day for five or ten minutes, for several days. It should be administered, not only to the asphyxiated, but to all normal children as well.

Diet and Dentition

For a considerable period attention has been directed to external causes as the factors which we should control if we are to avoid caries and pyorrhea.

In *Dental Cosmos*, Apr., 1931, Dr. W. H. Eddy reviews recent researches on the effects of dietary deficiencies and dental diseases. These show that dietary factors play a very important part in tooth immunity to caries. Boyd and Drain, with a mixed diet in which milk, vegetables and fruits play a large role, have appreciably reduced the incidence of caries in their experimental subjects. Hanke's orange juice results, Mellanby's vitamin-D studies and others too numerous to attempt cataloging indicate, far too clearly to disregard, the view that we may

ultimately learn how to build and maintain a caries-resistant tooth by proper control of diet. Much experimentation is needed and cooperation between the laboratory and the clinician is essential if this result is ever to be reached.

Boyd and Drain stress one quart of milk, one egg, one serving of meat or fish, two portions (one-half cup) of vegetables Class I and II exclusive of potatoes, one orange or tomato, one additional fruit, one teaspoonful cod-liver oil, six teaspoonfuls butter per day per child. Class I vegetables—spinach, chard, cauliflower, etc. Class II vegetables—peas, beans, etc.

Perinephritic Abscess

Primary forms of perinephritic abscess may arise from traumatism and injuries to the lumbar region. The secondary perinephritic suppurations arise from many sources; the infection may extend from extra-renal or renal foci or be borne by the blood or lymph channels.

In *J. Urol.*, Apr., 1931, Dr. J. C. Birdsall, of Philadelphia, reports 11 cases of perinephritic abscess which followed infection, extra-renal in origin. In 4 cases, where the abscess was renal in origin, 2 were secondary to renal tuberculosis, 1 to renal lithiasis and 1 to tumors of the kidney; in 1 case there was no ascertainable etiology.

Perinephritic abscess of extra-renal origin, in most cases, is the result of hematogenous metastasis of the infecting organisms to the renal cortex, followed by cortical abscess with direct extension to the peri-renal tissue. Perinephritic abscess may also result from lymphatic metastasis of the infection. The most common organism found is the staphylococcus aureus. There were no deaths.

Anterior Pituitary Therapy in Spontaneous Ovarian Dysfunction

As reported in *Endocrinology*, March-April, 1931, experiments by W. O. Nelson, of the Department of Biology, New York University, showed:

1.—Eight adult female rats, which for at least five weeks had shown no estrous changes in their vaginal smears, were given daily implants of anterior lobe, or daily injections of an extract prepared from anterior lobe pituitary material.

2.—Estrous occurred, in each instance, on the second or third day subsequent to the instigation of treatment.

3.—The ovaries and uteri prior to the treatment presented a picture approximating that of diestrus, while the remaining ovaries and uteri, removed subsequent to the occurrence of the induced estrus, were either of an estrous or meta-estrous character.

4.—When copulation was permitted at the time of induced estrus, successful pregnancies resulted.

5.—The pituitaries of these females were capable of promoting precocious maturity in a young rat when introduced intramuscularly.

6.—No further estrous changes could be demonstrated beyond the initial induced estrus.

7.—It is concluded that the etiology of the aberrant ovarian behavior observed in these ani-

mals probably was some derangement of the normal hypophyseal-gonadal relationship—possibly the non-release of the gonadal stimulating hormone.

8.—Attention is called to the possible therapeutic value of anterior lobe treatment in some types of human sterility.

Sickness Insurance

In *Hosp. Topics and Buyer*, May, 1931, John M. Smith, Director Hahnemann Hosp., Philadelphia, recommends extension of the clauses of the *Workmen's Compensation Act*, dealing with the compulsory carrying of insurance, to cover the cost of treating injured employees, so that all employees would be insured against the cost of treatment of nonoccupational diseases as well.

This would mean that all employed persons would be automatically covered, so far as physicians' and hospital charges are concerned, in cases of ordinary sickness, without any action on their part. The amounts payable should be paid direct to physicians or hospitals and the employees or insurance carrier should have the right of inspection and access to records so as to prevent fraud.

Intestinal Obstruction from the Use of Bran

The use of bran as a laxative food has become so popularized that the public has come to believe that it is harmless.

In *J.A.M.A.*, July 4, 1931, Dr. M. R. Davis, of Nashville, Tenn. reports the case of a woman who had had two previous abdominal operations and had become firmly addicted to the pill habit for constipation. About a week previous to having been seen by the reporter she had started to eat bran. Her symptoms were severe cramping pains in the abdomen with nausea and vomiting diagnosed as intestinal obstruction.

On operation, a complete obstruction was found about 12 inches from the ileocecal valve, due to a mass of bran about the size of a hen's egg.

Calcium Gluconate

In *J.A.M.A.*, July 4, 1931, Dr. A. L. Lieberman, of Gary, Ind., gives the following conclusions reached by him following a study of the pharmacologic effects of calcium salts, as observed experimentally in dogs and in 30 human test subjects:

1.—Calcium gluconate was taken as a most convenient representative calcium salt and studied as to dosage and effects on human beings and dogs, when given orally, subcutaneously and intravenously.

2.—This compound can be given in repeated and adequate amounts subcutaneously without causing either irritation or necrosis.

3.—Three or four grams a day after meals appears to be about the right dose for an adult.

4.—Blood-calcium attains its maximum elevation within an hour after subcutaneous or intramuscular administration of calcium and within four hours after being given orally.

5.—Intravenous calcium therapy is dangerous, because of the menace of sudden intravascular clotting and death.

6.—Urinary calcium appears to be a qualitative index of the state of the blood-calcium level. Whether this is true in all pathologic conditions remains to be seen. A urinary value of about 10 to 20 mg. an hour appears to be most desirable in avoiding either hypercalcemia or hypocalcemia.

7.—Highly suggestive digitalis-like effects of calcium were observed and the need for further investigation of this phase of the problem is noted.

Nutrition and the Respiratory Infections of Infancy

An intensive study of the records and family and feeding histories of large groups of hospitalized children, by Dr. S. W. Clausen, of Rochester, N. Y., the details of which are published in *New York St. J. Med.*, Jan. 17, 1931, leads him to the following conclusions:

Two factors are clearly at work in the production of severe respiratory infections in young children:

1.—*The presence of virulent organisms in the child's environment.* This factor depends especially upon the presence of older children in the family, and is so powerful that it can overcome any beneficial influence of good nutrition.

2.—*Bad nutrition.* Investigations suggest that a number of dietary factors are involved, among them rather conspicuously vitamin A; but we would emphasize that the situation is more complicated than the presence or absence of vitamin A in the diet; and that at present we are justified only in considering "Bad Nutrition" as due, not to one but to many factors.

The results of animal experimentation and of clinical experience may not yet be convincing, but they do permit us more definitely to formulate a problem for further research. Under specified conditions of exposure to infection, can we, by proper administration of vitamin A, lessen the liability to infection, or moderate its severity?

One important practical conclusion follows from this study. At the present time, when propagandists are urging the use of irradiation for the prevention of respiratory infections and the substitution of viosterol for cod-liver oil, we should demand adequate proof of their claims. We have good reason for advocating cod-liver oil for every infant.

Indispensable Uses of Narcotics

Physicians are often blamed as being responsible to a considerable extent for drug addiction, through the unnecessary or careless use and prescription of narcotics.

In *J.A.M.A.*, Mar. 14, 1931, Dr. Morris Fishbein, editor of the *Journal*, states that the whole matter of the prescription and indispensable use of narcotics is now being investigated jointly by the National Research Council, the United States Public Health Service and the American Medical Association. A series of articles will appear in the *J.A.M.A.* on the indispensable use of narcotics in the various specialties of medical practice. These articles are planned for

the information and guidance of physicians on the various aspects of this question. The first article, on the use of narcotics in surgery, is published in the above cited issue of the *J.A.M.A.* and a summary of it is given in a separate abstract.

Functional Albuminuria

Functional, orthostatic, postural or transient albuminuria is not an uncommon finding. In *J.A.M.A.*, May 9, 1931, Dr. R. S. Palmer, of Boston, based on the study of 174 such cases, finds that slight traces of albuminuria in young male adults, without other signs of renal disease, are of comparatively little significance, persisting in only one of thirty-five cases followed after eight years and having occurred transiently in one other, there being no symptoms of renal disease in any case.

Factors associated with functional albuminuria are underweight and a positive family history of vascular disease.

Poor posture was not found significant in this series.

The pathogenesis of functional albuminuria is not clear but is probably local and may be the result of stasis, producing a local acidosis.

No treatment of the condition is indicated. Individuals exhibiting this sign should not be excluded from normal physical exercise.

Psychotherapy as a Substitute for Narcotics

Fewer narcotics might be prescribed if those who treat human ills interpreted them in terms of personality, rather than in symptoms of the physical machine; fewer narcotics would be used if physicians and others only understood that physical discomfort is increased by the mental attitude of the patient.

Psychotherapy is always at hand to aid in creating favorable states of mind to withstand pain. It is the only medium for the rehabilitation of the addict, but it has been neglected by many as a substitute for habit-forming drugs and thus the hazard of drug addiction is increased.

Patients who withstand pain and discomfort badly are those who make poor adjustments to the ordinary conflicts of life; on the other hand those who adjust themselves best to life may have physical conditions with equal possibility for the production of pain and yet bear it tranquilly and in silence.—DRS. R. B. RICHARDSON, (Toronto) and T. H. WEISENBURG, (Philadelphia) in *J.A.M.A.*, May 9, 1931.

The Bárány Test

The Bárány tests are of value to anyone who deals with patients who may show symptoms referable to the head. The internist may find them helpful in eliminating intracranial causes for headache and vertigo. The neurologist would find them valuable as another means of interrogating certain parts of the brain. The ophthalmologist may find the ability to force movements of the eye muscle of value where there is a question of the existence or non-existence

of an actual paralysis of any of the extra-ocular muscles. The response to these tests are absolutely out of the voluntary control of the patient.

While these tests are largely theoretical and not as exact as we would like them to be they promise a great deal in the future. The conclusion one is forced to make as a result of these tests should be taken with caution, yet their performance should be encouraged, as containing considerable value when more accurate experimental data shall have been accumulated.

—DR. B. H. SHUSTER, of Philadelphia, in *Med. Times*, Dec., 1930.

Yeasts

Yeasts contain a substance that is growth-promoting to themselves as well as other types of independent cells. Yeasts, in relation to bacteria, food and water, are important agencies which are constantly operative in the intestine of man under our present dietary arrangements. The yeasts rob the body of the vitamins and while doing so by their faculty of producing alcoholic fermentation of certain sugars and amino-acids and their action on fats, produce substances poisonous to the body cells, locally and generally. Because of vitamin robbing foreign enzyme action—zymotic, lipolytic and proteolytic—and chemical poisoning, they lead slowly, either entirely or partly, to the production of many gross physical changes which are found in the sick.—DR. J. A. BUCHANAN, of Brooklyn, in *Southern Med. & Surg.*, Feb., 1931.

Pyrifer in the Treatment of Tabes

Pyrifer is a German preparation which consists of a suspension of dead colon bacilli, previously cultivated in milk. When injected into the blood it produces fever. It was first used in the treatment of tabes by Simmerling, in 1927.

In *J. Michigan S.M.S.*, Mar., 1931, Drs. I. L. Polozker and I. M. Altshuler, of Detroit, report that they have treated 8 cases of tabes dorsalis with Pyrifer. A series of 12 injections constitute a complete course. The injections are given on alternate days. Two of the patients were able to return to work; 5 were distinctly improved.

The authors think that this preparation merits further trial, since the reactions are apparently harmless and the results in ataxia are more favorable than those with malaria treatment.

Dietetic Treatment of Heart Failure

In *Med. Times and Long Island M. J.*, Mar., 1931, Dr. E. E. Cornwall, of New York, points out that, in congestive heart failure, more or less restriction of water and salt is required, depending on the extent of the heart failure and congestion. Restriction of protein may also be called for. The range of foodstuffs suitable in severe congestive heart failure may be limited to milk, modified milk, cream, fresh fruit juices, cereal gruels, lactose, dextrose and water. Sugar has an important place in the diet of congestive heart failure.

In any conditions of potential heart failure (myocardial and valvular disease), the quantity of food should not be excessive, though the quality may be that which best suits the general needs of the patient. The giving of five small meals instead of three large ones favors the cardiac conditions; the evening meal should usually be light.

If the potential heart failure is due to arterial hypertension, a lactovegetarian or a near lactovegetarian diet is usually called for, with restriction of protein and salt.

In acute inflammations of the heart, especially in the young, which occur secondarily, the primary condition as well as the cardiac complications may call for a very easy diet; but after convalescence has been established it is generally advisable to feed the patient liberally.

Vitamins and the Teeth

It has been shown by many observers that vitamin C is very necessary to keep sound teeth. Dr. Sherman Davis showed us last year that vitamin C localized the calcium and phosphoric acid where they belong, in the teeth and bones (instead of in the bloodvessels and in other wrong places), in combination with vitamin D which fixes or binds them. Dr. H. H. Robertson, a dentist, has proved the claims of Dr. Sherman Davis in several cases, stopping early dental decay and repairing the damage done by using a cod-liver oil preparation or vitamins A, B, and C, in conjunction with calcium and phosphorus tablets. The same could be done with the proper amount of milk and vitamin foods, fresh air, and exercise, if children could be induced to eat and live as they should, but they have been trained to expect medicines instead of diet. Moderation in all things and the correct combined use of all recognized hygienic measures are the keynotes to restore and maintain normal health.—DR. J. W. TORBETT, of Marlin, Tex., in *Physic. Therap.*, Mar., 1931.

Aspiration and Air Replacement in Empyema

Various methods have been devised for the drainage of empyemas. In *J.A.M.A.*, May 2, 1931, Dr. J. A. Danna, of New Orleans, describes a method which consists in emptying the empyema cavity of pus and gradually, as the pus is being removed, replacing it with air, the volume of the air injected being equal to that of the pus removed.

The technic of the procedure is as follows: The site and outline of the purulent effusion is determined. A point in the intercostal space, corresponding to the lowest point of the empyema cavity, is anesthetized with 0.5 percent solution of procaine hydrochloride, infiltrating all the tissues from skin to pleura inclusive. A large needle is now attached by a stiff rubber tube connection to a 50 or 100 cc. Luer syringe and inserted at this point. A syringe of pus is now aspirated, the tube is clamped with hemostatic forceps, the syringe is disconnected, emptied, filled with an equal quantity of air and reconnected to the tube and needle, the forceps are unclamped, and the contained

air is injected. This alternate aspiration of fluid and injection of air is repeated until, on aspiration, air comes through the needle, which shows that the needle point is now above the fluid line or that all fluid has been aspirated. The patient and the needle are manipulated so as to make sure that the needle rests in the bottom of the pus cavity, and the procedure is repeated until air again comes from the needle, which indicates that no more fluid remains. This is preferably done with the patient sitting up, but very sick patients are treated lying down, with the head and shoulders slightly elevated.

When the amount of pus is large, a second spot in the chest wall is infiltrated with the anesthetic solution and a second smaller needle is introduced. The first larger needle is connected to the suction apparatus and the second needle to some form of pneumothorax apparatus, whereby the amount of air that comes through can be measured. The suction apparatus is now turned on and the pus is rapidly withdrawn. As each 100 or 200 cc. of fluid is drawn into the suction chamber, a corresponding quantity of air is injected. Thus, the architecture of the cavity, as it were, is not altered, and the hydrostatic, or rather the physical, compression of the lung is undisturbed, the inelastic fluid mass being replaced by an elastic air cushion.

Of course, no permanent cure can be expected until the source of infection or contamination ceases to act as such. Thirty-five (35) consecutive cases of empyema have been treated by this method with satisfactory results. In this series there were only 2 deaths, neither of which the author thinks could be attributed to the method. All the others made a complete clinical recovery.

Pregnancy and Heart Disease

According to Drs. P. A. Daly and S. Strouse, of Chicago, in *J.A.M.A.*, May 16, 1931, the pregnant patient with heart disease offers exactly the same subject for therapy as does the normal woman, except for the extra mechanical burden of pregnancy.

The authors observed about 500 patients with heart disease through pregnancy, delivery and afterwards, for periods up to 8 years. Every type of heart disease was represented, the etiology including syphilis, acute rheumatic fever, arteriosclerosis and thyroid disease.

Of the entire series of 500, 12 (2.4 percent) patients died, but analysis of the causes of death shows that several of these patients would probably have died even without pregnancy, and others had a gloomy prognosis, even if they had no heart disease.

The most important factor to be considered in the management of patients with chronic heart disease during pregnancy is the added amount of work occasioned by the pregnancy. The object of treatment is to maintain or increase the cardiac reserve, so that, toward the end of pregnancy and during delivery, there is sufficient muscular efficiency to handle the work which is at its maximum during this time.

In analyzing the author's cases, a tendency to overtreatment is seen. There should be a careful balancing of rest and work. The most frequent evidence of overtreatment is seen as a

result of insistence on too much rest in bed. There is no justification for the tendency to consider pregnancy as a peculiarly disastrous quality of work, as compared to any other of similar quantity.

A Modified Milk Diet for Peptic Ulcer Cases

In *Ann. Intern. Med.*, April, 1931, Drs. R. C. Blankinship and W. H. Oatway, of Madison, Wis., suggest the following modification of milk for use in the dietary treatment of peptic ulcer:

Milk	Ounces 24
Cream	8
Strained orange juice.....	10
Sugar	Grams 20
Total: Protein 32, Fat 77, Carbohydrate 96.	
Calories 1205.	

This is given in 6 ounce feeding every 2 hours from 8 A.M. to 8 P.M., the patient being in bed.

This mixture produces the finest and softest curds. It is very palatable and its use is stated by the authors to have given highly satisfactory results.

The Gwathmey Anesthesia in Labor

An editorial in the *Lancet*, May 30, 1931, refers to a careful study of 41 cases of labor, by Dr. O'Donel Browne in the Rotunda Hosp., Dublin, in which the Gwathmey rectal anesthesia was employed. The orthodox technic was followed.

Introduction of the rectal anesthetic was made between pains and above the presenting part. On the average, two of these rectal instillations were needed, the time between them being five hours. Dr. Browne believes that the magnesium sulphate prolongs the relief given by the morphine, without increasing its toxic effect. The bowel was washed out at the end of labor. The average duration of labor, from the time when the cervix was two to three finger-breadths dilated, was 17 hours in primiparae and six hours in multiparae. Ether was eliminated from the child's lungs. There was in no case any need for resuscitation, and delay in the second stage was not abnormal. As regards alleviation of pain, 21 patients had no recollection of any pain after the beginning of treatment, 13 had marked relief, 6 had moderate relief, and only 1 woman was quite conscious of her labor.

Impaction of the Teeth

The gradual shortening of the mandible and maxilla is an evolutionary development.

It is natural that the shorter the jaw the greater the tendency for the crowding of the teeth, thus preventing the eruption, in particular, of the canines and third molars. It has been shown by several anthropologists that the jaws of the modern races are decreasing in size. This progressive diminution in the size of the jaws is attributed to the influence of civilization, and particularly to the soft diet, and consequent lessened dental use, thus the masticatory apparatus lacks sufficient stimulation for the normal growth of the jaw bones. Furthermore, it has been stated that the cranial contour of modern

man has developed, while the length of the jaw has decreased. This has resulted in crowded and impacted teeth.

The growth of the jaws, and the natural movement of the teeth is in a forward direction, and therefore, anything which might interfere with this forward movement, or growth, will very likely cause impaction.—H. S. WILKINSON, B.D.S., in *New Zealand Dent. Journ.*

Habits which Affect the Development of the Denture

As stated by Belah G. Nelson, D.D.S., in *Dental Cosmos*, Feb., 1931, among the habits which affect the development of the denture are, first, that of sucking at the mother's breast. This function exercises the jaws, lips and masticatory muscles.

The eruption of the deciduous teeth marks the time to begin taking food that needs chewing. This is the time to establish the habit of mastication and, unless it is done at this time, the chance of ever developing it sufficiently to establish and maintain the normal structural form of the dental apparatus is very doubtful.

Proper early training should establish the habit of eating hard, coarse breads, fruit and fibrous vegetables that cleanse the teeth and give the jaws their needed exercise.

Every child should form the habit of cleansing the mouth every day.

Other habits which affect the form and development of the denture and are factors in malocclusion are pillow and posture habits, biting the lips, pencil biting and manipulation of the lips, tongue or cheeks in a manner at variance with their normal use.

Nutrition by the Duodenal Tube

In *M. J. & Record*, April 15, 1931, Dr. M. Fleisch-Thebesins, of Frankfort-on-the-Main, Germany, states that he has used the duodenal tube as a means of giving liquids (especially those containing calories) following operations on the stomach. At first the tube was introduced into the jejunum before the operation; this method, however, was found unsuccessful. Then he adopted the method of applying the tube on the awakening of the patient from the anesthetic. The success by this procedure was greater, at least with those patients who had learned to swallow the tube. No disadvantage has been observed, nor was there any evil effect on the suture in operations on the stomach necessitating it.

Strains and Sprains

In *Am. J. Surg.*, May, 1931, Dr. A. J. Buka, of Pittsburgh, remarks that the terms strain and sprain are too commonly used as synonyms. A strain is an overstretching of some part of the musculature; a sprain is a wrenching of a part attached near or around a joint.

In strain, the general objective findings are negative for the examiner without handling the part; in sprain swelling is an early sign and, if there is much injury to the soft parts, there may be discoloration. There is great pain dur-

ing manipulation, extensive tenderness around the entire area involved and the x-rays will commonly detect a fragment, sliver or shell of bone separated more or less from the parent bone. There are no unfavorable sequelae from untended strain.

The prognosis in strains is always good, whether treated or not; the prognosis in sprains is guarded, unless properly treated. If improperly treated, severe damage or deformity may result.

The treatment of strains is always meted out with a full consideration of the individual's habits. Ideally, in the young, and the old of athletic tendencies, the use of the strained part should continue. This, however, must be moderated with caution during the lighter normal activities. Massage and free manipulations are very helpful.

The treatment of sprains is much the same as is the treatment for fractures. A sprain requires the placing of the part in a position which is that of overcorrection, with comfort to the patient. This position must be maintained by immobilization with light splintage, plaster-of-Paris being the dressing of choice.

Diphtheria Toxoid

In *J. Immunol.*, March, 1931, Olga R. Povitzky, and associates, of the New York City Health Dept., remark that, because of its proved greater efficacy, toxoid (anatoxin) has come to replace the use of toxin-antitoxin in immunization against diphtheria.

An intensive study has been conducted under the direction of Dr. Park, at the Research Laboratories of the New York City Health Department, on the comparative value of toxin-antitoxin and toxoids. The results, in children and animals, were convincing enough for Dr. Park to introduce the use of toxoids instead of toxin-antitoxin in immunization of small children against diphtheria. For school children, because of the greater incidence of protein reactions, he still prefers toxin-antitoxin.

The Treatment of Placenta Previa

As stated by Dr. M. P. Rucker, of Richmond, Va., in *J.A.M.A.*, Mar. 9, 1931, there are certain fundamental principles in the treatment of placenta previa that should be observed, whether the patient is treated in general practice or in a well-equipped obstetric hospital.

1.—The significance of a hemorrhage in the last half of pregnancy should not be minimized. Too often the patient is encouraged with the hope that it will not recur.

2.—No pelvic examination should be made until everything is in readiness to manage the patient should it be found that the placenta is presenting.

3.—A vaginal pack done as a makeshift; i.e., until help can be secured or the patient can be taken to a hospital, probably does more harm than good. A better plan is to give the patient a dose of morphine and disturb her as little as possible.

4.—The importance of blood transfusions is self-evident.

5.—One cannot show the cervix too much respect. Dilatation should not be hurried and

should be complete before any operative delivery, except a Braxton Hicks version, is attempted. If Voorhees bags are used, a number 5 is preferable. When the bag is about to come through the cervix, the patient should be on the delivery table and everything should be in readiness for an immediate delivery should that be necessary.

6.—The extra-ovular placement of the bag is preferable.

7.—Postpartum hemorrhage has not been a problem in my cases, but its danger should be constantly borne in mind.

8.—In the interest of the child, cesarean section has a place in complete and partial placenta previa.

Innocent Glycosuria

The results of a study of 91 cases of benign glycosuria, by Drs. H. C. Powelson, of Rochester, Minn. and R. M. Wilder, of Chicago, as given in *J.A.M.A.*, May 9, 1931, has shown that this condition presents no definite symptoms and many cases probably escape detection. Normoglycemic glycosuria is by no means uncommon. Patients with benign glycosuria lose weight and strength when placed on treatment for diabetes. They gain in weight and strength when dietary restrictions are removed. They may be made very uncomfortable by treatment with insulin. On the other hand, true diabetes mellitus should be recognized early and treated appropriately, in order to suspend its normal tendency to progression.

A simple dextrose tolerance test is a reliable procedure for differentiating normoglycemic glycosuria from early or mild diabetes mellitus. Of eighty-two cases diagnosed normoglycemic glycosuria by this test, diabetes mellitus did not develop in any, in the intervals of one to twelve years that elapsed after the tests were made. The familial character of normoglycemic glycosuria is illustrated by a family in which the mother and four of six children were shown to have the disorder.

Systemic Reactions from Pollen Injections

Evidence presented by Dr. G. L. Waldbott, in *J.A.M.A.*, May 30, 1931, supports the view that reactions from pollen injections are elicited by an excess of antigen absorption above the patient's individual tolerance.

This effect may be produced by too fast absorption, such as an accidental intravenous injection, by the back-seepage of extract into a vein punctured accidentally, or by an overdose of antigen. Factors contributing to the effect of an overdose are: incomplete absorption of an injection given some time previously; absorption of additional pollen through the nose during the pollen season; absorption of substances other than pollen to which the patient is sensitive.

The clinical manifestations of pollen reactions appear to be identical with those of reactions from injections of horse serum.

From the observation of patients one gains the impression that, if the reaction is accelerated, it manifests itself as a shock which is very

close to, if not identical with, the anaphylactic shock in the experiment with the guinea-pig. If the reaction is not violent enough to cause an anaphylactic shock, allergic manifestations, such as asthma, are produced, localization of which is likely to be determined by the pressure of antigen in the affected parts of the body.

Uterine Hemorrhage, the Menstrual Cycle and Pathologic Findings

As presented by Drs. C. F. Fluhmann and Dorothy L. Morse, of San Francisco, in *Am. J. Obst. & Gynec.*, Apr., 1931, an analysis of 1137 cases of abnormal uterine bleeding showed that 630 were associated with pregnancy, while 507 cases were in non-pregnant women. The latter patients were classified into 8 distinct categories, according to the clinical manifestation of the hemorrhage.

1.—Menorrhagia, or profuse or prolonged flow in patients with otherwise normal menses. The sequence of events of the menstrual cycle in the ovaries and endometrium is undisturbed. The most frequent etiologic factor is any condition which interferes with the contractile power of the uterus or results in a hyperemia of the pelvic organs.

2.—There is an irregularity in the time factor, the menstrual periods appearing too frequently, or are delayed, or are totally irregular in their occurrence. The main etiologic factor is to be sought in disturbances of ovarian function, which may be of a primary endocrine nature or secondary, due to anatomic lesions.

3.—(a) Hemorrhage initiated with a menstrual period may continue for a prolonged length of time. In these cases are mainly found lesions intimately connected with the endometrium, such as submucous fibromyomas and endometrial polyps, or definite pathologic changes such as hyperplasia of the endometrium or endometritis.

(b) Continuous bleeding may set in during the stage of endometrial proliferation. The physiologic explanation may be found in a sudden destruction of the corpus luteum, due to extension of an inflammatory process.

(c) Bleeding during the endometrial stage of secretion is of unusual occurrence, and may be partly due to the premenstrual hyperemia of the pelvic organs.

4.—Hemorrhage may occur in the middle of the menstrual cycle, at a time corresponding to the rupture of the graafian follicle—the so-called "ovulation bleeding."

5.—A type of hemorrhage characterizing hyperplasia of the endometrium is found when the menstrual periods become progressively more profuse or irregular and end finally in continuous bleeding.

6.—Bleeding may occur following a period of amenorrhea in non-pregnant women of the childbearing age due to: (a) hyperplasia of the endometrium; or (b) a traumatic or ulcerative lesion of the uterus following a previous removal or destruction of the ovaries.

7.—Hemorrhage may occur at irregular times and without any connection with the events of the menstrual cycle, due to traumatic or ulcerative lesions of the cervix or endometrium resulting from new-growths or inflammation.

8.—Irregular hemorrhage due to the same causes as in Group 7 may occur in women past the climacteric. In rare cases ovarian new-growths may also affect the endometrium and produce bleeding.

Gastric Analysis in Children

Most of the reports in the literature, regarding gastric analysis in children, relate to pathologic subjects. There is a lack of standards for normal children.

In *Am. J. Dis. Child.*, May, 1931, Drs. H. Dietrich and D. C. Shelby, of Los Angeles, report having made systematic analyses of the gastric contents in a number of normal children, from the results of which they draw the following conclusions:

1.—The figures obtained for free hydrochloric acid and total acidity, in the gastric contents of healthy children, present wide variations. A normal figure cannot be stated.

2.—The fractional method of gastric analysis, employing the small (Jutte) tube and an alcohol meal, is decidedly preferable in children. It produces less trauma, it is definitely more easily performed, and it probably gives more accurate information regarding the acidity of the gastric juice than the Ewald method, with which the gastric contents are frequently diluted with saliva, mucus and blood.

3.—The use of histamine marks an advance in the knowledge of gastric secretion.

4.—Histamine stimulation should be employed in all patients who show a definitely low secretion of acid by the usual method.

5.—The value of gastric analysis in children will be enhanced by more studies and would be greatly benefited by further improvement in present methods.

A Type of Colitis Seldom Recognized

In *Practitioner*, May, 1931, Sir A. Castellani, M. D., of London, Eng., again invites attention to a common type of chronic colitis which he has previously described. This is due to the presence of intestinal germs of a species which has been classed as *B. castellanii*, of which there are two types, Type A and Type B. These are similar to the true dysentery bacilli, in that they produce no gas in any sugar, but differ from them in producing acidity in lactose and in coagulating milk, these properties being much more rapidly demonstrable with Type B than with Type A.

The type of colitis produced is clinically manifested by severe diarrhea and pyrexia, but without pus or blood in the stools. The treatment is by rest and fluid diet; autogenous and stock vaccines have given good results.

Effects of Intrapartum Care of the Mother

In the Chicago Lying-In Hospital, where special attention is given to intrapartum care, there were 57 maternal deaths in 23,136 deliveries, over a period of 9 years—a rate of 24.6 deaths per 10,000 births. For the entire United States registration area, the rate has varied from 65 to 68 maternal deaths per 10,000 births over a

period of years. In other countries it runs about 51 to 60 per 10,000.

Of the 57 deaths, 14 were due to pneumonia; 10 to toxemia; 9 to heart disease. Only 3 were due to septicemia and only 1 of these 3 cases resulted from an infection which developed in the hospital.

The general morbidity rate among these parturient cases was only 4.3 percent.

The intrapartum care given to the patients at the Chicago Lying-In Hospital is essentially the same as that given in any large teaching or special maternity hospital.—DR. J. P. GREENHILL, of Chicago, in *Illinois M. J.*, May, 1931.

Urologic Examination of Infants and Children

According to Dr. M. F. Campbell, of New York, in *M. J. & Record*, April 15, 1931, the indications for urologic examination in infants are identical with those in adults. Although, in older children, subjective symptoms may be reliable guides, in the very young only objective signs afford clues of probable urinary tract disease.

In Dr. Campbell's experience, the indications for urologic examination in the very young have been: pyuria, 80 percent; disturbances of micturition, 15 percent; hematuria, 2 percent; tumor, 2 percent; and pain, 1 percent.

With recent advances in urologic diagnostic procedures and the development of several types of miniature cystoscopes, the technical difficulties encountered in carrying out complete urologic examinations in young patients are negligible.

It is the author's experience that it is far more difficult to convince the attending physician of the advisability of a urologic examination than to convince the parents of the child. The greatest obstacle is fear of instrumental morbidity or even mortality, but such fears are unwarranted. A study of the postcystoscopic febrile reaction in 203 infants and children examined by the author, showed a temperature rise in 12 percent, but in 80 percent of these the temperature did not rise above 100 degrees and did not last longer than 48 hours.

Surgical Removal of Teeth Versus Tooth Pulling

In *Dental Outlook*, May, 1931, A. M. Nodine, D.D.S., of New York City, points out that the tooth pulling methods now practiced are not in accordance with modern surgery. The removal of a defective tooth, as a focus of infection, should be carried out with all the aseptic precautions and refinements of technique called for by any other surgical operation.

Practically the only difference, in most cases, between the old barber tooth puller and the present-day tooth puller is that the present-day tooth puller has a better place, better equipment, a dental degree and he uses a more effective anesthetic.

Were the time taken to explain to the patient (1) that it is a definite focus of infection that must be removed; (2) that it is neither desirable nor necessary to remove the bone supporting sound teeth; (3) that in cases where

a plate is to be made the base upon which it is to rest may be made smooth and so shaped that the plate will be comfortable; (4) that quick healing and less pain is desirable; (5) that hemorrhage may be prevented; (6) that all the tooth must positively be removed and that this is only possible, in practically every case, if a careful surgical method be employed, in nine cases out of ten he will pay and understand the reasonableness of an increased fee.

The Treatment of Intestinal Parasites

Almost all textbooks dealing with the subject of ridding the intestinal tract of parasites stress the importance of fasting and of purging the patient before administering the vermifuge.

In *J.A.M.A.*, June 6, 1931, Dr. A. H. Kemp, of Angola, Africa, states that administering vermifuges without preliminary fasting and purging has given highly satisfactory results, so far as effecting the elimination of parasites from the intestinal tract is concerned. Tapeworms, hookworms and ascarides respond equally well to this method of treatment, especially when carbon tetrachloride is used. No untoward effects have been observed in 3,000 cases.

Synthesis of Vitamin A in the Animal Body

In *Med. Times & Long Isl. M. J.*, April, 1931, Dr. F. E. Chidester, of Morgantown, W. Va., cites certain experimental facts pointing to the possible synthesis of vitamin A within the animal body.

Fifty-four rats received linoleic acid and ferrous iodide in various combinations with and without irradiated ergosterol. These 54 animals were so completely depleted of vitamin A that only 21 were able to eat the mixture. Of these, the group receiving linoleic acid, ferrous iodide and irradiated ergosterol, had 6 individuals that were able to eat the mixture and all of these recovered from vitamin A deficiency, 5 of them living for over 20 weeks, their growth curves also showing the beneficial influence of the substances administered.

The argument is that unsaturated fatty acids in the presence of iodine, either favor the synthesis of vitamin A or act as a substitute for it.

Effect of Thyroid Therapy on Underdeveloped Children

As reported in *Am. J. Dis. Child.*, June, 1931, Dr. Anne Topper, of New York, studied the effect of thyroid therapy on 16 underdeveloped children. There were no obvious defects in the function of the thyroid gland, but the children were selected because of some retardation in mental or physical development, in which thyroid therapy might be of value.

In four children with subnormal basal metabolism, thyroid extract in small doses promptly increased the rate. In twelve children with an initially normal basal metabolic rate, thyroid extract in identical doses over a fairly long period of time did not increase the rate.

All of the children showed an increase in

height during the period of treatment that was well over the normal expected increase for their age. The greatest increase in height was demonstrated in the children between 11 and 14 years of age, the period of puberty, when the impulse to grow is at its height. Development was also manifested in dentition and in the development of bone, as seen in x-ray pictures of the wrists in several cases.

Since thyroid extract does not seem to affect the basal metabolism of children with a normal basal metabolic rate, the stimulative effect on their growth and development leads the author to believe that the basal metabolism should not be the only criterion of thyroid therapy.

The difference in action of thyroid extract on growing children and on adults makes one believe that thyroid, a metabolic catalyst, increases the phase of metabolism that is dominant in the individual person—anabolic processes or growth and development processes in the child, and catabolic or oxidative processes in the adult, whose growth and development processes are complete. This stimulative effect on the growth processes in childhood is best seen at the time of puberty, when the impulse to grow is at its height. The question of the effect of thyroid extract during the first year of life, another period of great impulse to grow, is at present being studied. During the middle years of childhood, the stimulative effect of thyroid extract, although present, is not so great.

These observations are in accord with Kendall's opinion that thyroxin speeds metabolism in the direction in which it is going. They explain the different results of the action of thyroid extract on young and on older experimental animals. They also explain the paradoxical retention of nitrogen in the cretin and the fact that toxic goiter induced by iodides (which exert their metabolic influence through the thyroid gland), while common in adults, is rare before puberty.

Intestinal Worms

In *Ann. Intern. Med.*, Mar., 1931, Dr. P. F. Whitaker, of Kinston, N. C., states that 23 percent of 1650 adult, white, generally well-to-do, office patients were found positive for the presence of intestinal parasites.

Intestinal parasitic disease, particularly hookworm infestation, is much more prevalent than is generally recognized and by no means so easily eradicated as is commonly supposed. Careful histories, thorough physical examinations, carefully-made stool and blood examinations, with their proper interpretations, offer the best means of detecting these infections.

A palpable spleen is recorded as a common physical finding in intestinal parasitic disease and the explanation of this finding is attempted. So far as the author knows, this finding has not before been reported as associated with intestinal parasites.

Secondary anemia is practically a constant finding in intestinal parasitic disease. Attention is called to the increase of eosinophiles.

For hookworm and round worm infestation, a combination of oil of chenopodium and carbon tetrachloride is used, in average doses of 30 minims.

For tapeworms, nothing better has been found

than the oleoresin of aspidium, in 40-grain (2.60 Gm.) doses, combined with 2 drams (8 cc.) of spirits of chloroform.

Anterior Pituitary Hormones

A summary of present-day knowledge of anterior pituitary gland hormones, as given by E. P. Bugbee, A. E. Simond and H. M. Grimes in *Endocrinology*, Jan.-Feb., 1931, shows that there are eleven distinct physiologic functions claimed by various research workers, for the anterior pituitary: (1) stimulation of growth; (2) stimulation of sexual development and ripening of follicles resulting in ovulation; (3) stimulation of lutein cell development, resulting in prevention of ovulation by imprisoning the ova; (4) stimulation of sexual development by a substance which can be given by mouth; (5) stimulation of metabolism by increasing the specific dynamic action of food substances; (6) stimulation of the thyroid gland; (7) lowering of gaseous metabolism; (8) stimulation of water intake and output; (9) stimulation of lactation; (10) lowering of non-protein nitrogen in blood; (11) initiation of the bleeding of menstruation.

One of these activities (4) may be due to a placental hormone, rather than one elaborated by the anterior pituitary.

Ten of these activities have been demonstrated by means of transplants of anterior pituitaries or by alkaline extracts.

The hormones responsible for the ten activities are similar in their general chemical properties, such as stability to acid, alkali and heat.

A growth hormone is clearly separate from one causing luteinization in ovaries, for the former is readily destroyed by 0.4 percent trisresol, while the latter is not destroyed by the same concentration of trisresol.

Sodium Malate and Gastric Acidity

In a previous paper (see abstract in *CLINICAL MEDICINE AND SURGERY*, July, 1930, p. 560) the possibility of the substitution of sodium malate for sodium chloride as a food condiment was pointed out.

In *Ann. Intern. Med.*, May, 1931, Drs. J. C. Krantz and associates report some further experimental and clinical observations in the same direction. The malate mixture used consisted of 85.5 percent of di-sodium malate, 9 percent of tri-sodium citrate, 5 percent of tri-ammonium citrate and 0.5 percent of magnesium bromide. This substance has been found greatly to reduce the hydrogen-ion concentration of gastric acidity. Its use as a condiment, to replace table salt in cases of hyperacidity, would seem to possess a twofold advantage: first, the decreasing of free gastric acidity and, second, the elimination of a potential source of hydrochloric acid.

Premature Infants and Viosterol (100 D)

A study by Dr. E. W. May, of Detroit, as given in *J.A.M.A.*, April 25, 1931, shows that during 1928, in the Herman Kiefer Hospital, Detroit, the mortality among prematurely-born infants within the first few weeks was 23.8 percent. In this year no viosterol was given. In 1929, during which viosterol was given to some extent, the mortality was 15.0 percent, and in 1930, during which the administration of viosterol (100 D) was a routine procedure for all the new-born, with other conditions remaining the same, the mortality among premature infants was reduced to 10.1 percent.

It became evident that there was a definite improvement in the weight, general wellbeing, hemoglobin concentration, calcium-phosphorus index and bone development in these surviving infants constantly under supervision who received an adequate dose of viosterol, in contrast with those infants whose mothers were rather indifferent about following instructions as to the daily administration of viosterol and the general care and feeding of the infant.

Cod-liver oil, in doses sufficient to prevent rickets in premature infants, is not well tolerated, because of its large content of fat. With viosterol, one is enabled to give these premature infants effective doses of vitamin D without upsetting digestion, and thus prevent rickets from developing.

Blood-Pressure and Calcium Metabolism

In *Prescriber*, Feb., 1931, Dr. G. A. Stephens, of London, Eng., defines blood-pressure as that pressure which is exerted on the blood by the tissues, especially the contractile arteries. The greater the pressure on the blood and its corpuscles, the more handicapped are the movements of the corpuscles.

With a change in the surface tension of the corpuscles, there is a modification of their internal metabolism. Increased basic blood pressure interferes with the metabolism of the whole body.

Sixty percent of the body weight (apart from water) is composed of calcium. Sixty percent of the body metabolism is, therefore, the metabolism of and connected with the calcium salts and their assortment into organic compounds and suitable ions.

Increased basic pressure, then, is closely associated with deficient calcium metabolism, and it will be found that, in a large number of cases, the administration of calcium salts, together with parathyroid substance, will help to reduce the basic blood pressure.

NEW · BOOKS

*To keep the power to teach parallel with the power
to write, and the power to learn a little in
advance of either, makes greatness.*

—ADA BORDEN STEVENS.

Wohl: Interpretation of Laboratory Findings

BEDSIDE INTERPRETATION OF LABORATORY FINDINGS. By Michael G. Wohl, M.D., Associate Professor of Experimental Medicine, Temple University Medical School; Chief of Metabolic Clinic, Temple University Hospital and Chief of the First Medical Diagnostic Clinic, Mt. Sinai Hospital, Philadelphia, Pennsylvania. With an Introduction by Joseph McFarland, M.D., Sc.D., Professor of Pathology, University of Pennsylvania. Illustrated. St. Louis: The C. V. Mosby Company. 1931. Price \$6.00.

This useful book describes all the commoner and simpler laboratory tests of proved value, especially those of the body fluids, which every practitioner should be able to make and evaluate in arriving at his clinical diagnosis. The more complicated laboratory procedures, such as the Wassermann reaction, are not included. Well-chosen illustrations and several plates in colors add value to the text.

The author's object is to correlate the laboratory and clinical findings, but he emphasizes the fact that a laboratory report is only an adjunct to diagnosis and not the diagnosis itself.

The language is simple and the procedures recommended are easily within the scope of the equipment ordinarily carried by most physicians in their offices. It should be of decided value to general practitioners.

Hawk and Bergeim: Physiologic Chemistry

PRACTICAL PHYSIOLOGICAL CHEMISTRY. A Book Designed for Use in Courses in Practical Physiological Chemistry in Schools of Medicine and of Science. By Philip B. Hawk, M.S., Ph.D., President of the Food Research Laboratories, Inc., New York City, and Olaf Bergeim, M.S., Ph.D., Associate Professor of Physiological Chemistry in the University of Illinois, College of Medicine, Chicago. Tenth (25th Anniversary) Edition (Rewritten and Reset). With two Full-Page Plates of Absorption Spectra in Colors. Six Additional Full-Page Color Plates and two Hundred and Eighty Figures of Which Twelve are in Colors. Philadelphia: P. Blakiston's Son & Co., Inc. 1931. Price \$6.50.

The tenth edition—representing the twenty-fifth anniversary of the issue—of Hawk and Bergeim's textbook of physiologic chemistry, has been made the occasion of rewriting it to a

large extent and of entirely revising and reprinting it.

The work was designed for the use of teachers and students of practical physiologic chemistry in schools of medicine and science; it covers the whole course and as now presented it brings every department into line with the most recent advances and theories.

Among the chapters which have been rewritten or extensively revised are those on the chemical properties of solutions, on proteins, on the endocrine organs and on energy metabolism. A large section of the book has been devoted to the special subject of vitamins.

While physicians may derive much information from the work, regarding the chemistry of physiologic processes and fundamental metabolic phenomena, it is more particularly of value to special students, who will find it in every way complete as an up-to-date class and laboratory manual.

The general bookwork leaves nothing to be desired and a number of new illustrations clarify the descriptions of recently acquired knowledge. There is also an excellent index.

von Economo: Encephalitis Lethargica

ENCEPHALITIS LETHARGICA; Its Sequelae and Treatment. By Constantin von Economo, Professor of Psychiatry and Neurology in the University of Vienna. Translated and Adapted by K. O. Newman, M.D., Pathologist to the Oxford County and City Mental Hospital, Oxford. With 21 Illustrations. London: Humphrey Milford, Oxford University Press. 1931. Price \$6.00.

Professor von Economo's name has been closely associated with the curious disease, encephalitis lethargica, he, indeed, having been, apparently, the first to describe it clinically and morphologically in 1917, when the monograph collecting his various contributions on the subject first appeared in German.

The present book is the first official English translation, with some slight additions to bring the English and American literature into the scope of the book, the latter, however, being dealt with in rather a sparse fashion, considering that some rather noteworthy contributions to the pathologic anatomy and clinical aspects have been made by American authors.

There are four main parts: The general introduction; the acute form of encephalitis lethargica; the sequelae of encephalitis lethargica; and

a general review. The parts are divided each into a number of chapters which discuss particulars. The plan of the work is ably executed.

While all clinical aspects of the disease have been fully described, the pathologic anatomy receives particular attention. The disease has more than an academic interest for the average American practitioner, even though the condition is rather rarely observed here.

Goadby: Diseases of the Oral Cavity

DISEASES OF THE GUMS AND ORAL MUCOUS MEMBRANE. By Sir Kenneth Goadby. K.B.E., M.R.C.S., L.R.C.P., D.P.H. (Cantab.), Lecturer on Bacteriology of the Mouth, Dental Department, University College Hospital; Specialist Medical Referee for Industrial Poisoning, London and Home Counties (Home Office); etc. Fourth Edition. New York and London: Humphrey Milford, Oxford University Press. 1931. Price \$13.00.

This excellent treatise on diseases of the gums and oral mucous membrane has now run into the fourth edition. It is intended to supply the general practitioner and dental student with authoritative information on this class of pathologic conditions, based especially on the author's experience of the past 20 years as a stomatologist and bacteriologist.

The present edition stresses the importance which has been given to focal infections of the oral cavity, although the author does not go to the extremes which some recent writers have claimed for these.

The latest researches showing the importance of vitamins and deficiency diseases, in connection with pyorrhea alveolaris and dental caries, are discussed at length. Much of the matter included in previous editions has been rewritten to bring it into accord with the latest findings.

The 13 chapters which make up this extensive monograph of 500 pages discuss, in addition to the subjects just mentioned, gingivitis, tumors and ulcerations, special diseases of the gums and oral cavity, disease with oral symptoms, and neuralgias and mouth neuroses.

The book covers in a very thorough manner a field in which but a rather limited amount of similar investigative work applicable to the clinic has been published. It should be of particular value to stomatologists, as well as to general practitioners who wish to become intimately acquainted with the accepted views regarding the bacteriology of the mouth cavity and the generalized effects of infections originating in this region.

The book work is excellent, and the illustrations are particularly commendable.

Hall: Ancient Philosophy

LECTURES ON ANCIENT PHILOSOPHY: An Introduction to the Study and Application of Rational Procedure. By Manly P. Hall: Illustrated with diagrams by Howard W. Wooker. First Edition. Los Angeles: The Hall Pub. Co. 1929. Price \$5.00.

Those who would understand the conditions in which we and all the world are now living must go further back than the beginnings of this country; further than the beginnings of

formal history; and then back and back through the unimaginable ages of archeologic time, until the fundamentals of the structure and functions of the universe (of which humanity is a tiny part) are reached.

This book takes one on such a journey, revealing in a logical and orderly manner the basic truths which wise men have known in all ages, and which are now being given out in greater volume and detail than ever before in the world's history.

If the teachings here set forth were generally known and applied, the problems which are now vexing the races would be solved.

No seriously thinking man or woman can afford to lack the knowledge which can be found between the covers of this large and beautifully-made book; but to dabbles this intellectual gymnasium will appear like foolishness.

Child Care and Training

THE CHILD FROM ONE TO SIX. Publication No. 30 of Children's Bureau, United States Department of Labor. Revised 1931. For sale by the Superintendent of Documents, Washington, D. C. Price 10 cents.

Infants are, as a rule, well cared for; and school children are, in most places, receiving adequate attention. But the "preschooler"—the child between two and six years—by no means always has the attention to which he is entitled.

This little book is an excellent guide to the physical and mental care and training of young children and should be in the hands of all parents. Physicians who deal with children can also read it with profit, as it contains many suggestions that will help them in dealing with these little patients and their parents.

The insignificant price of the book places it within the reach of even the poorest families, and doctors might well order a supply to give to their patients who can make use of it.

Spira: Gastroduodenal Ulcers

THE CAUSATION OF CHRONIC GASTRODUODENAL ULCERS. A New Theory. By J. Jacques Spira, M.R.C.S. (Eng.) L.R.C.P. (Lond.). With an Introduction by Sir Humphry Rolleston, Bart., G.C.V.O., K.C.B., Physician in Ordinary to H.M. The King; Regius Professor of Physic in the University of Cambridge; etc. London and New York: Humphrey Milford, Oxford University Press. 1931. Price \$2.50.

In this essay the author puts forward a new theory of the causation of gastroduodenal ulcers. This theory incriminates a food factor as responsible; namely, fat which, when introduced into the stomach, regularly causes regurgitation into the stomach of bile salts which, when mixed with the acid gastric contents, damage the mucous membrane.

The proximity of the duodenum, as compared with the stomach, to the biliary papilla is brought forward as an explanation of the greater frequency of duodenal ulcers and of the greater difficulty of treating them, as compared with gastric ulcers.

Fat is principally of value to the organism

from its vitamin content which, however, is comparatively small.

The author points out that he has employed treatment of peptic ulcers on the lines of his theory for 10 years, with uniformly satisfactory results.

The great prevalence of gastric and duodenal ulcers and of states resulting from disturbances of the digestive juices makes worthy the consideration of any plausible theory by physicians.

Harrison: Venereal Diseases

THE DIAGNOSIS AND TREATMENT OF VENEREAL DISEASES IN GENERAL PRACTICE. The Routine Management of Syphilis and Gonorrhea Employed in the St. Thomas's Hospital Venereal Diseases Department. By L. W. Harrison, D.S.O., M.B., Ch. B., F.R.C.P.E., Brevet Colonel R.A.M.C., and K.H.P. (Ret.); Director of Venereal Department St. Thomas's Hospital; etc. With a Chapter on The Medico-Legal Aspects, etc., by F. G. Crookshank, M.D., F.R.C.P., etc. Fourth Edition. London and New York: Humphrey Milford, Oxford University Press. 1931. Price \$8.25.

This book embodies the routine management of syphilis and gonorrhea employed in St. Thomas's Hospital, London, Eng., which is in accordance with the new, generally-accepted treatment by specialists in these diseases.

The manual has now run into four editions since its first appearance in 1918, and it is intended for use by the general practitioner, so as to induce a wider and more scientific treatment and eradication of the widely spread venereal diseases.

There are 23 chapters with 3 appendices. They deal with the diagnosis and treatment of syphilis and gonorrhea, including their systemic ramifications, and the technic of the recognized standard tests for determining the presence or absence of the causative agents.

There is a special chapter dealing with the medico-legal relations of venereal diseases.

Fighting Disease with Drugs

FIGHTING DISEASE WITH DRUGS. The Story of Pharmacy. A Symposium Edited by John C. Krantz, Jr. With an Introduction by Dr. James H. Beal. A Publication of The National Conference of Pharmaceutical Research. Baltimore: The Williams & Wilkins Company. 1931. \$2.00.

What are drugs? Where do they come from? and how do they act?

In this symposium, each chapter of which is written by a specialist in the knowledge of drugs or of their production, the layman or inquiring pharmacist will find the answer to these questions.

The story is "certainly a most interesting one, in which appear, in succession, the witch doctor, the apothecary of the old days, the modern chemist and the ultra-modern research men in a present-day pharmaceutical plant for the manufacture and control of drugs, who must be familiar with the sciences of chemistry, pharmacy, biochemistry, bio-assay and pharmacodynamics.

Dr. O. Kamm writes the initial chapter on

the quest for health; Dr. A. R. L. Dohme reviews the dawn and heyday of pharmacy. Then come chapters on the sources of drugs, a general review by Dr. E. F. Kelly; drugs from the vegetable kingdom by Dr. H. W. Youngken, this being necessarily one of the longest chapters in the book, as well as a most interesting one; drugs made from mineral sources and bacteria-made drugs and vitamins are dealt with respectively by Drs. W. H. Husa and J. F. Anderson.

The newer era of synthetic drug building is represented by two important contributions. Drs. Roger Adams and O. Kamm sketch the modern chemical duplication of natural products, and Dr. Ernest H. Volwiler tells us of chemical research work which has succeeded in producing safe and effective narcotics, anesthetics, analgesics, sedatives, etc.

Dr. J. C. Munch deals with the uniformity of drugs; the problem of the law, public health and drugs is handled by Dr. R. L. Swain; and the running of a present-day drug store prescription department is graphically told by Dr. W. Bruce Philip.

The work is edited by Dr. John C. Krantz, Jr., who also reviews the outlook for pharmacy.

To say that the book is fascinating is merely trite; it is fascinating plus interesting, plus informative and instructive. This may be implied from the fact that each contributor is a foremost expert on the subject on which he writes. It gives the evolution and the present-day highly perfected position of the scientific and industrial aspects of pharmacy, viewed from every angle.

Report of Medical Department of United Fruit Company

NINETEENTH ANNUAL REPORT OF THE MEDICAL DEPARTMENT OF THE UNITED FRUIT COMPANY, General Offices, Boston, Mass. 1930. Gratis on Request.

The annual reports of the medical department of the United Fruit Company always provide interesting reading, particularly in regard to the sanitation work on the various Central American, West Indian and South American plantations.

Section II of the nineteenth annual report (1930) contains several papers by the medical officers of the company concerning anti-malarial measures. It appears from these that the most effective method of control is by periodic blood surveys of the population, discovering carriers of the heavy gametocytes of *plasmodium vivax* and treating them with quinine and plasmodochin. The work of destruction of breeding places of the infecting mosquitoes is still carried on but is only a secondary measure. Quinine remains the medicament of primary importance but it appears necessary to complement its action by plasmodochin.

Section III deals largely with the measures adopted against amebic dysentery. Good results are obtained from the combined use of bismuth and emetine. The newer products yatren and anavodine are also giving satisfactory results.

The less prevalent tropical diseases are also dealt with in Section III, and the other sections contain a number of special case reports as well as administrative reports and accounts of

research work being done by the Company.

As a whole, the work of the Company shows what can be accomplished to render tropical countries healthy by the persistent application and enforcement of scientific methods of modern hygiene.

Doane: Bi-Terminal Tonsillar Coagulation

GUIDE TO LOCALIZED BI-TERMINAL TONSILLAR COAGULATION. By L. Leo Doane, A.M., M.D., Ph.D., F.A.C.S., Fellow of the A.M.A.; Fellow of the American Academy of Ophthalmology and Otolaryngology; Fellow of the American Physical Therapy Association; etc. Butler, Pa.: Washburn & Co., Publishers. (Distributed by McIntosh Electrical Corporation, 223-33 N. California Ave., Chicago, Ill.) 1931. Price \$3.00.

At the present time tonsillectomy is apparently put on the defensive: Quite apart from the alleged unnecessary too-extensive use of the operation, its proponents have to show that its immediate and permanent results are so superior to those obtained by other methods, that they overcome the possible dangers of the occurrence of serious hemorrhage and later complications when the operation is done by the average operator.

In this short monograph, Dr. Doane advocates the advantages of electrocoagulation in the removal of infected tonsils when it is indicated. Special attention is given to instrumentation and to the author's technic. A high-frequency apparatus, capable of producing a frequency of some 1,500,000, which gives a smooth non-faradic current is employed.

The author prefers a localized bi-terminal method with instruments of his own design which he has had specially manufactured by the McIntosh Electrical Co. These instruments, in addition to the needles, consist of five special electrodes with ring terminals (for different sized tonsils), any one of which, placed in a universal handle, becomes the indifferent electrode. All technical details for application of the method in practice are described.

It is claimed that the bi-terminal method employs a weaker and less dangerous current than other coagulation methods, that it causes less reaction and that it is more convenient.

Dobson: Dynamic Retinoscopy

DYNAMIC RETINOSCOPY. By Margaret Dobson, M.D., London; Ophthalmic Surgeon to the New Sussex Hospital for Women, Brighton; Oculist in charge of the Kilburn (L.C.C.) Eye Clinic; late Ophthalmologist, attached to the Royal Army Medical Corps, Egyptian Expeditionary Force, 1916-18; etc. Illustrated. London: Humphrey Milford, Oxford University Press. 1931. Price \$2.50.

This little volume contains much more than its title implies. It would be difficult to find elsewhere, in less than sixty pages, such a complete and accurate statement of the principles of objective refraction.

Experienced ophthalmologists will regret that the author did not devote more space to the

subject which gives her book its title and upon which she has made an important personal contribution, namely, the objective measurement of the power of accommodation. Because the methods in common use are so satisfactory it will be difficult to convince us that the objective method has any great practical advantage, but with the ingenious instrument which Dr. Dobson has devised it will not be difficult to give it a thorough clinical try-out.

B. H.

Lodge: Life Beyond Death

CONVICTION OF SURVIVAL. Two Discourses in Memory of F. W. H. Myers. By Sir Oliver Lodge, F.R.S. London: Methuen & Co., Ltd., 36 Essex Street W. C. 1930. Price 2s net.

When a scientist as eminent as Sir Oliver Lodge speaks, it behooves us to listen respectfully to what he says, even if we do not agree with him.

The first and larger part of this little book is a discussion of the scientifically observed phenomena which, to an increasing number of people, carry conviction of the fact that human individuality survives the physical change called death, with extracts from certain remarkable communications received from so-called dead people.

The second part is devoted to a beautiful eulogy of the life and character of that earnest pioneer of a new branch of science, that poet and philosopher, Frederick W. H. Myers.

People with open minds will enjoy this rather intimate glimpse of two of the outstanding men who have been leaders in laying the foundation of scientific psychism.

Macbeth: Organic Chemistry

ORGANIC CHEMISTRY For Medical, Intermediate Science and Pharmaceutical Students. By A. Killen Macbeth, M.A., D.Sc., F.I.C., etc., Professor of Chemistry, the University, Adelaide. With Diagrams. Second Edition. New York and London: Longmans, Green and Co. 1931. Price \$2.80.

An introductory textbook of organic chemistry intended for the use of medical, intermediate science and pharmaceutical students. The author's purpose is to present the fundamental aspects of the subject so that the student may be encouraged to think more and memorize less.

This second edition is revised and enlarged and it seems to fulfill well the purpose aimed at.

Sainsbury: The Cardiac Cycle

THE CARDIAC CYCLE. By Harrington Sainsbury, O.B.E., M.D., F.R.C.P., Consulting Physician to the Royal Free Hospital, the Victoria Park Hospital for Diseases of the Chest, and the Royal National Hospital, Ventnor. New York: William Wood and Company. 1931. Price \$1.75.

The author's essay will be interesting to physiologists from the point of view of the fundamentals of the physiology of the circulation of the blood. His aim is to follow step by step the sequence of events which constitute the cardiac cycle—a series of disconnected actions which repeat themselves with astonishing uniformity

and which in their summation form that physiologic function termed the heart beat.

The author's principal finding is that the blood circulatory movement seems to be the motive power of the lymph flow.

Alexander: Union of Souls

THE UNION OF SOULS. By ALEXANDER, Grand Duke of Russia. Translated by Jean S. Proctor. New York: Roerich Museum Press. 1931. Price \$1.25.

We have long been taught that love and brotherhood should be the guiding rules of life; we all feel that cooperation should be substituted for competition and selfishness replaced by altruism. But our present civilization is not doing this. It is not that we do not know; it is simply that we somehow cannot manage to bring our religious beliefs into harmony with our daily lives.

Imbued with these ideas, the writer of this little book makes an earnest plea for the formation of a "Union of Souls," the members of which, realizing that the soul is the essence of man's being, and each with an understanding of and respect for another's belief, will set out to purge themselves of all selfishness and hate and, by living Truth,—that universal Love which draws us near to God—open the gateway to a fuller and more radiant existence.

The book is simply but well written and should prove enlightening to all those interested in the practical side of religion.

L.M.C.

Dr. Kagan on Hebrew Literature

RESEARCHES IN HEBREW LITERATURE. By Dr. Solomon R. Kagan. Volume II. Spokane, Washington: Moses N. Janton. 1930. Price \$1.00.

In our May, 1931 number we mentioned that Dr. Solomon R. Kagan, a physician who is also a Jewish Rabbi, had published "Researches in Hebrew Literature." We have now received the second volume of this work, which deals more especially with Jewish literary activity from the Middle Ages down to the present time. There are many notes of interest regarding celebrated Jewish physicians in this volume.

In our July number we reviewed another book by Dr. Kagan, entitled "Hygiene and Health".

Dittrich: Expert Medical Knowledge

HANDBUCH DER ÄRZTLICHEN SACHVERSTÄNDIGEN TÄTIGKEIT. Unter Mitwirkung hervorragender Fachgelehrter herausgegeben von Prof. Dr. Paul Dittrich. Prag. Vierter Band, 2. Teil: Lieferung 54. Berlin und Wien: Urban & Schwarzenberg. 1931. Price RM 9.50.

Dr. Julius Loewy's monograph on what the medical expert should know in regard to internal diseases forms a part of the second half of Volume 4 of Dr. P. Dittrich's handbook of medical expert testimony or forensic medicine.

Bailey: Physical Signs in Clinical Surgery

DEMONSTRATIONS OF PHYSICAL SIGNS IN CLINICAL SURGERY. By Hamilton Bailey, F.R.C.S. (Eng.), Surgeon, Royal Northern Hospital, London. Third Edition, Revised and Enlarged. With 318 Illustrations, Some of Which Are in Color. New York: William Wood and Company. 131. Price \$6.50.

It is generally conceded that in recent years there has been a tendency to place too great reliance upon purely laboratory and auxiliary aids in the diagnosis of surgical diseases, rather than to examine thoroughly the patient physically for the elicitation of guiding symptoms. Dr. Bailey's book is an attempt to reverse this process.

There are 25 short chapters arranged by regions in which all the physical signs of diseases whose treatment call for surgical manipulations are described in a concise way and to a great extent illustrated very clearly. Abdominal conditions receive very special consideration.

This is a book which should be of great value to surgeons and to recent graduates of medicine whose opportunities for clinical studies have been limited. There is scarcely a day in a busy practice in which it could not be consulted with profit.

Mattisson: Ulcer of the Stomach

DAS MAGENGESCHWÜR; Eine ätiologische und klinische Untersuchung mit besonderer Bezugnahme auf den weiteren Verlauf der Krankheit. Von Dr. Karl Mattisson, Primärarzt des Väterdörsens Sanatorium, Borås (Schweden). Mit 97 Tabellen und 35 Abbildungen im Text. Berlin und Wien: Urban & Schwarzenberg. 1931. Price RM 9.—.

A well-written monograph which covers all phases of the stomach ulcer question. The statistical and clinical aspects are especially well brought out and, in regard to treatment, the author has shown that within recent periods there has been astonishingly little real progress made.

Liepmann: Teaching of Obstetrics on the Phantom

DER GEBURTSHILFLICHE PHANTOMKURS; in 172 Federzeichnungen für Ärzte und Studierende. Von Universitäts-Professor Dr. med. Wilhelm Liepmann, Direktor des Deutschen Instituts für Frauenkunde und der Frauenklinik "Cecilienhaus". Zweite, vermehrte und verbesserte Auflage. Berlin und Wien: Urban & Schwarzenberg. 1931. Price geh. RM 8.—geb. RM 9.20.—.

A teacher's and student's manual for the study of obstetrics by means of the female pelvic phantom, especially Sellheim's phantom. Particular attention is paid to mechanical (forceps) extraction. The book is suitable for those preparing for examination in obstetrics who read German.

MEDICAL · NEWS



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The Only Fish Doctor

Animals as well as men are subject to diseases and accidents, to suffering and death, and require skilled care in their misfortunes. Such care is lovingly given by the veterinarians, among whom are specialists, the same as in other professions.

Fish are animals, too, but unless they live in Toronto, Canada, they just have to die if they fall ill, for the world's only fish doctor, James Palmer, is connected with the Walker House Aquarium, in that city, to take care of the rare specimens housed there.

The picture shows "Dr." Palmer operating upon one of his finny patients.

Midwives

The United States is overlooking one of the real factors in our high maternal mortality rate, in failing to provide adequate training for midwives. There are only two schools in the country which give such instruction: at Bellevue Hospital and the Manhattan Maternity Hospital, both in New York City.

Some physicians may be surprised to learn that 47,000 women are practicing midwifery in the United States and delivering about 15 percent of our babies;

and their mortality rates are, as a whole, better than ours, because they wait patiently and let nature do her work.

Most of our good midwives have been trained in Europe, where they know the importance of such training.

Send for your copy of "Who's Your Health Banker." Ready now.

First Memorial to a Woman Dentist

On February 3, 1931, a fully-equipped dental department, in the Sarah Hackett Stevenson Memorial Home, Chicago, was dedicated as a memorial to Dr. Gillette Hayden, one of the pioneer women in the dental profession. In this department, three women dentists, Drs. Dora Hendrickson, Beulah Nelson and Chloe Zachariau, will give free dental treatment to all children in the Home.

It is interesting to note that this, the first memorial to a woman dentist, becomes a part of an institution dedicated to a woman physician, Dr. Stevenson.

International Union Against Tuberculosis

The annual meeting of the Council of the International Union against Tuberculosis was held in Paris, France, July 9, 1931, with delegates from seventeen countries in attendance.

At this meeting it was decided to hold the next conference of the Union at The Hague, Netherlands, September 6 to 9, 1932. The three main subjects of discussion at this meeting will be: The relationship between allergy and immunity; gold therapy; and aftercare of tuberculous persons.

The National Tuberculosis Association, 450 Seventh Ave., New York City, is planning a special party to attend this Conference, at low rates for the round trip, and will be glad to send full particulars to interested persons.



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Notable Birth Control Advocates

Here are some of the prominent thinkers and leaders of thought who are striving to put birth control on a sound and civilized basis in this country, as they appeared at Washington a few months ago, to work for the passage of the Gillett Bill to legalize the proper dissemination of contraceptive information.

From left to right, they are: Dr. Sydney E. Goldstein, of the Jewish Institute of Religion, New York; Henry Pratt Fairchild, Professor of Sociology at New York University; Mrs. Margaret Sanger, Chairman of the National Committee on Federal Legislation for Birth Control; and Dr. J. Whitridge Williams, Professor of Obstetrics at Johns Hopkins University.

No one can read a single number of *CLINICAL MEDICINE AND SURGERY* and not be a little better qualified to practice medicine.—M. S. R., M.D., Yates Center, Kans.

Medical Lobby in Illinois

The Illinois State Medical Society has an exceptionally active and well-supported Legislative Committee, of which Dr. John R. Neal, being a resident of the State Capitol, is the prime mover.

During the recent sessions of the Legislature, in spite of a flood of bills which would influence the status of the physicians of the State in one way or another, this active and alert committee secured favorable action on every one of its recommendations, for or against, regarding the medical or near-medical bills introduced during the session.

This is a tip to the physicians in states where the twilight-zone practitioners are getting all the breaks.

A Doctor with a Spine

When a governor starts dictating, even in medical matters, about which he knows as much as a hog does about algebra, many physicians will roll over and jump through. Not so Dr. Leroy Long, dean of the School of Medicine of the University of Oklahoma!

When Gov. W. H. ("Alfalfa Bill") Murray, of that commonwealth, recently insisted that chiropractors be allowed to do their spine thumping in the University Hospital, Dean Long handed in his resignation rather than lend countenance to such antics.

Send for your copy of "Who's Your Health Banker." Ready now.

United States Civil Service Examinations

The United States Civil Service Commission announces the following-named open competitive examination:

Senior Medical Technician (Bacteriology)
For U. S. Veterans' Administration Hospital, Tuskegee, Ala., only.

Applications must be on file with the U. S. Civil Service Commission at Washington, D. C., not later than October 13, 1931.

The United States Veterans' Administration Hospital at Tuskegee, Ala., is for colored patients only, and it is the policy to select colored eligibles for appointment when available. As the Commission has had difficulty in securing a sufficient number of eligibles for this hospital, qualified colored persons are urged to apply.

Social Service Worker (Prisons Bureau)

Applications must be on file with the U. S. Civil Service Commission at Washington, D. C., not later than October 22, 1931.

Full information may be obtained from the Secretary of the United States Civil Service Board of Examiners at the post office or customhouse in any city or from the United States Civil Service Commission, Washington, D. C.

Send · For · This · Literature

To assist doctors in obtaining current literature published by manufacturers of equipment, pharmaceuticals, physician's supplies, foods, etc., CLINICAL MEDICINE and SURGERY, North Chicago, Ill., will gladly forward requests for such catalogues, booklets, reprints, etc., as are listed from month to month in this department. Some of the material now available in printed form is shown below, each piece being given a key number. For convenience in ordering, our readers may use these numbers and simply send requests to this magazine. Our aim is

to recommend only current literature which meets the standards of this paper as to reliability and adaptability for physician's use.

Both the literature listed below and the service are free. In addition to this, we will gladly furnish such other information as you may desire regarding additional equipment or medical supplies. Make use of this department.

When requesting literature, please specify whether you are a doctor of medicine, dentistry, medical student, a registered pharmacist, or a nurse.

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| S- 3 Storm Binder and Abdominal Supporter. 4-page folder by Dr. Katherine L. Storm. | S-347 Graphic Chart of the Treatment of Circulatory Disturbances. Merck & Company. |
| S- 47 Campho-Phenique in Major and Minor Surgery. Campho-Phenique Company. | S-354 Getting the Most Out of Life Stanco, Inc. |
| S- 95 Everything for the Sick. Lindsay Laboratories. | S-383 Syrup Histosan Controls the Cough in Acute and Chronic Bronchitis, Pneumonia and other Pulmonary Diseases. Ernst Bischoff Co., Inc. |
| S-116 Hemo-Glycogen, The New Product Hemoglobin Compound and Liver Extract. Chappel Bros., Inc. | S-391 Imhotep. Egyptian Medicine Was a quaint Mixture of Rationalism and Magic—Agarol. William R. Warner & Co., Inc. |
| S-120 Building Resistance — Guiatonic. William R. Warner & Co., Ltd. | S-392 Arthritis. Its Classification and Treatment. Battle & Co. |
| S-196 "Facts Worth Knowing." Intravenous Products Co. of America, Inc. | S-401 When the Cross Roads are Reached in Hemorrhoids (Pile). Schering & Glatz, Inc. |
| S-528 Prophylaxis. August E. Drucker Co. | S-404 Urotropin, the Intravenous Administration of the Original Formaldehyde-Liberating Urinary and Systemic Antiseptic. Schering & Glatz. |
| S-269 Special Course No. VI Traumatic Surgery. Illinois Post Graduate Medical School, Inc. | S-410 Acidosis. A Warning Sign in Pregnancy—Alka-Zane. Wm. R. Warner & Co., Inc. |
| S-271 The Intestinal Flora. The Battle Creek Food Company. | S-414 Laboratory Test in Pictures—Silvogan. Ernst Bischoff Company, Inc. |
| S-310 Conclusions from published research of the value of Ceanothyn as a hemostatic. Flint, Eaton & Co. | S-425 Cerebrospinal Fever (Epidemic, Cerebrospinal Meningitis, Meningococcic Meningitis, Spotted Fever), Symptoms and Specific Treatment with Anti-Meningococcic Serum. The National Drug Co. |
| S-318 Blood Clinical and Laboratory Diagnosis. A book of 160 pages by Henry Irving Berger, M.D. Battle & Company. | |

- S-456 Science Applied to Tobacco. Health Cigar Company, Inc.
- S-465 Diagnosis of Cardio-Vascular Diseases, by Henry Irving Berger, M.D. Sultan Drug Company.
- S-480 The Incidence of Eczema in Skin Diseases in about 20 percent. Bilhuber-Knoll Corp.
- S-491 Announcing a New and Better Sedative—Sedormid. Hoffmann-La Roche, Inc.
- S-504 Bedtime Nourishment. Mellin's Food Co.
- S-524 Balance, the Importance of the Acid-Base Equilibrium of the Body. The BiSoDol Company.
- S-525 The Treatment of Hemorrhage with Therapeutic Notes on the Use of Ceanothyn. Flint, Eaton & Company.
- S-535 Vera-Perles of Sandalwood Compound. The Paul Plessner Company.
- S-539 Burdick Light Therapy Equipment. The Burdick Corporation.
- S-540 Infra-red Therapy with Burdick Zoalites. The Burdick Corporation.
- S-543 The Circulation of Bile. The Plessner Company.
- S-545 The Etiology and Treatment of Hay Fever—Hay Fever Antigens. The National Drug Company.
- S-547 —this is where You enter the picture—Detoxol. The Wm. S. Merrell Company.
- S-548 The Hormone, October, 1931, The Harrower Laboratory, Inc.
- S-551 Hypogonadism and Sterility—Gonad Co. (Harrower); Plestrin. The Harrower Laboratory, Inc.
- S-554 Eliminating the Nasal Pathology of Hay Fever. Metapollen Laboratories.
- S-555 Colonic Therapy by H. W. Rothman, M.D. Schellberg Manufacturing Corporation.
- S-556 The Colon: A Factor in Disease by H. W. Rothman, M.D. and O. Boto Schellberg. Schellberg Manufacturing Corporation.
- S-557 "The Newer Knowledge of Ethyl Iodide Therapy" Non-toxic Iodine Inhalation. Local and General Infections of Skin, Nose, Throat, Lungs. Burnham Soluble Iodine Co.
- S-559 "New Born" Necessities. "Nss" Sales Co., Mfrs.
- S-560 This Perfected Potent Remedy For Skin Diseases—Healoderm. Healoderm, Ltd.
- S-561 Improved Guide for the fitting and use of Holland-Rantos Diaphragms. Holland-Rantos Co., Inc.
- S-564 Peptic Ulcer. A symposium of the current literature. The BiSoDol Co.
- S-565 Tricalcol for efficient calcium therapy of the highest resorption and assimilation. The Doho Company.
- S-566 Strontisal. The Doho Company.
- S-567 Vaccineurin-Cures. The Doho Co.
- S-568 Letters in Evidence. Philo Burt Company.
- S-569 The Cause and Cure of Spinal Curvature and Kindred Ailments. Philo Burt Company.
- S-570 Urinary Tests and Color Charts for Practical Use in Office Diagnosis. Od Chemical Co.
- S-571 Detoxification in the Treatment of Intestinal Infections. The Wm. S. Merrell Company.
- S-572 The "Britesun" Vibra-Life. Brite-sun, Inc.
- S-573 Britesun Prescription Infra-Red Lamps. Britesun, Inc.
- S-574 Gynecological Hints. Denver Chemical Mfg. Co.
- S-575 Yeast Therapy. Standard Brands, Incorporated.
- S-576 Catalog No. 10. Electro Surgical Instrument Co.